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Siekefonds van die Suid-Afrikaanse Spoorweë en Hawens

AANSTELLING VAN SPOORWEGDOKTER : DANVILLE (PRETORIA)

Aansoeke word van geregistreerde mediese praktisyns ingewag vir aanstelling in die betrekking van spoorwegdokter, Danville, d.i. Danville, Proklamasieheuwel, Iscordorp, gedeelte van Pretoria, wes van Van Boeschotenlaan (uitsl.) en Edwardstraat (insl.) tot by Schuttestraat (insl.) en ten noorde van Visagiestraat (insl.), Cordelfos, Voortrekkerhoogte en die spoorwegtrajek Pretoria (uitsl.) tot by Magaliesburg (uitsl.) teen 'n salaris van £1,348 per jaar, plus die gelde en toelaes wat in die Regulasies van die Siekefonds voorgeskryf word, en met die reg om privaat te praktiseer.

Die salaris is onderhewig aan wysiging in ooreenstemming met die sensus van lede wat op 1 April van elke jaar afgeneem moet word.

Die aanstelling geskied kragtens die regulasies van die Siekefonds en opsegging van dienste is onderworpe aan vier maande kennisgewing deur een van beide partye.

Die suksesvolle applikant moet in Pretoria woon, dienste op 'n datum wat gereël sal word aanvaar en sy pligte ooreenkomstig die regulasies van die Siekefonds uitvoer.

Aansoeke moet die Distriksekretaris, Oos-Transvaalse Distriksiekefondsraad, Scheidingstraat, Pretoria, nie later nie as 31 Maart 1954 bereik, en applikante moet die volgende vermeld:

1. Volle naam.
2. Kwalifikasies (waar en wanneer verkry).
3. Ondervinding (waar en wanneer verkry en opgedoen).
4. Datum van geboorte.
5. Land en stad van geboorte.
6. Getroud of ongetroud.
7. Of ten volle tweetalig.
8. Of Suid-Afrikaanse burger.
9. Watter staatsbetrekking, indien enige, beklee word.

Werwing deur of ten behoewe van enige applikant stel so 'n applikant bloot aan diskwalifikasie.

Enige verder besonderhede wat verlang word, kan op aanvraag van die Distriksekretaris by bovermelde adres verkry word.

P. J. Klem
Hoofsekretaris

Johannesburg
27 Februarie 1954

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EDITORIAL

TEETHING POWDERS

As a result of further reports of poisoning from teething powders containing mercury the *British Medical Journal* and the *Lancet* [1, 2] have recently and simultaneously drawn attention to the dangers resulting from their administration. The subject of acrodynia (pink disease) and the possible role of mercury in its causation has been considered by many workers in different parts of the world; at the South African Medical Congress held at Johannesburg in September 1952 Dr. B. Epstein [3] submitted a report on his studies in Pretoria of many cases of this disease and their relation to mercury in teething powders. Apparently seven million teething powders of the most popular brand are sold annually in England, each containing half a grain of calomel (mercurous chloride). In South Africa a good number of teething powders compounded by local firms and pharmacists contain mercury as calomel or grey powder. The traditional use of teething powders continues on a wide scale and is not easily stopped, but the use of mercury preparations in them should be forbidden. The administration of mercury by mouth to infants is no longer required for any purpose in modern paediatric practice. Teething powders are available which do not contain mercury and are therefore free from this danger.

Serious illness and death may result from the administration of mercury to infants and children; the toxic effect of mercury on the kidneys is well known. Fortunately these accidents are uncommon. On the other hand many paediatricians believe that mercury is important in the causation of acrodynia. The role of the metal in producing the condition is not understood, but it has been suggested that it may be acting as a metallic poison or that pink disease arises from hypersensitivity to the mercury. Abnormal quantities of mercury in the urine have been demonstrated in many cases and injection of 'dimercaprol' sometimes produces beneficial effects, but, since many children receiving mercury do not show the reaction, pink disease may be due to hypersensitivity of the individual to mercury. It should be noted too that large quantities of mercury are sometimes found in the urine of children who have been given powders not containing mercury.

VAN DIE REDAKSIE

TANDEKRYPOEIERS

As gevolg van verdere verslae oor vergiftiging deur kwikbevattende tandekrypoeiers het die British Medical Journal en die Lancet [1, 2] onlangs gelyktydig die aandag gevestig op die gevare verbonde aan die gebruik van sulke poeiers. Baie navorsers het in verskillende dele van die wêreld 'n studie van akrodinie (*pink disease*) gemaak en die moontlikheid oorweeg dat die siekte deur kwik veroorsaak kan word; op die Suid-Afrikaanse Mediese Kongres wat gedurende September 1952 in Johannesburg gehou was, het dr. B. Epstein [3] verslag gelewer i.v.m. sy studie van baie gevalle van hierdie siekte in Pretoria en die verhouding daartoe van kwikbevattende tandekrypoeiers. Skynbaar word sewe miljoen tandekrypoeiers van die mees gewilde soort jaarliks in Engeland verkoop en elke poeier bevat 'n halwe grein kalomel (merkurochloried). 'n Hele aantal tandekrypoeiers wat in Suid-Afrika deur plaaslike firmas of aptekers berei word bevat kwik in die vorm van kalomel of ‚grey powder'. Die tradisionele gebruik van tandekrypoeiers gaan op groot skaal voort en dit is nie maklik om dit te keer nie; maar die gebruik van kwik in hierdie poeiers behoort belet te word. Op die gebied van kindersiektes beantwoord die mondelinge toediening van kwik aan suigelinge hedendaags geen doel hoegenaamd nie. Tandekrypoeiers is beskikbaar wat geen kwik bevat nie en derhalwe van hierdie gevaar vry is.

Die toediening van kwik aan kinders en suigelinge kan ernstige siekte of dood veroorsaak; die vergiftigende uitwerking van kwik op die niere is wydbekend. Gelukkig kom sulke ongelukke selde voor. Terselfdertyd is daar baie kinderspesialiste wat glo dat kwik baie te doen het met die veroorsaking van akrodinie. Die rol wat die metaal speel om die toestand te veroorsaak is nie duidelik nie maar die mening word geopper dat dit as 'n metaalgif ageer of dat oorgevoeligheid tot kwik akrodinie veroorsaak. In baie gevalle word abnormale hoeveelhede kwik in die urine gevind en inspuitings van dimercaprol bring somtyds verligting maar aangesien baie kinders wat kwik inkry nie die reaksie toon nie is dit moontlik dat akrodinie veroorsaak word deur individuele oorgevoeligheid tot kwik. Dit is ook wetenswaardig dat groot hoeveelhede kwik in die urine van kinders gevind

There are many observers who are not convinced that mercury is a common cause of pink disease. The patient's history does not always reveal that mercury was ever taken, and the use of the powders is so widespread that the appearance of pink disease may sometimes be coincidental. Pink disease is unlike the condition of mercurial poisoning observed in adults. Nevertheless mercury would appear to play a part in some cases of pink disease and other theories about the disease have not been convincing.

There is no good reason for giving mercury in this way to infants. The public should be warned about the possible dangers that may result from the use of teething powders containing calomel, and in fact this type of teething powder should be forbidden. Teething powders do not help the teeth to come out, but if they contain an analgesic they will have a place in treatment more rational, safer and cheaper than if they contain mercury. The English firm of John Steedman and Co., makers of a popular teething powder, have removed calomel from their powders and are now distributing a new mercury-free preparation.

REFERENCES

1. Editorial (1953): Lancet, **2**, 1247.
2. Editorial (1953): Brit. Med. J., **2**, 1317.
3. Epstein, B. (1953): S. Afr. Med. J., **27**, 823.

kan word aan wie geen kwikbevattende poeiers gegee is nie.

Baie waarnemers is nie daarvan oortuig nie dat kwik 'n algemene oorsaak van *pink disease* is nie. Dit kan nie altyd uit die pasiënt se geskiedenis afgelei word dat kwik wel ooit toegedien is nie. Poeiers word so algemeen gebruik dat die voorkome van akrodinie somtyds toevallig kan wees. Die toestand van akrodinie verskil van dié van kwikvergiftiging in volwassenes. Nietemin blyk dit waarskynlik dat kwik 'n aandeel het in sommige gevalle van akrodinie en ander teorië omtrent die siekte is onoortuigend.

Daar bestaan geen goeie rede vir hierdie toediening van kwik aan suigelinge nie. Die publiek behoort teen die moontlike gevare van kalomelbevattende tandekrypoeiers gewaarsku te word. Inderdaad, hierdie soort tandekrypoeier behoort verbied te word. Tandekrypoeiers help nie die tande om uit te kom nie maar as hul 'n verdowende middel bevat sal hul gebruik geneeskundig meer rasioneel, veiliger en goedkoper wees dan as hul kwik bevat. Die Engelse firma *John Steedman and Co.* vervaardigers van 'n populêre tandekrypoeier het kalomel uit hul poeiers verwyder en bemark nou 'n nuwe kwikvry produk.

VERWYSINGS

1. Van die Redaksie (1953): Lancet, **2**, 1247.
2. Van die Redaksie (1953): Brit. Med. J., **2**, 1317.
3. Epstein, B. (1953): S. Afr. T. Geneesk., **27**, 823.

ABSTRACTS : UITTREKSELS

Pitts *et al.* (1953): *Intermittent Viomycin Therapy in Pulmonary Tuberculosis: Employed singly and in combination with Intermittent Streptomycin or daily Para-Aminosalicylic Acid*, Dis. Chest, **23**, 241; through J. Amer. Med. Assoc. (1953): **152**, 968.

'Of 80 men with moderately or far advanced pulmonary tuberculosis and with sputums positive by culture for tuberculosis before the institution of treatment, 36 received 1 g. of viomycin at 8 a.m. and at noon and 1 g. of streptomycin at 8 p.m. every third day. Twenty-two patients were given 2 g. of viomycin in 2 divided doses every third day and 12 g. of *p*-aminosalicylic acid daily; the remaining 22 patients received 2 g. of viomycin in 2 divided doses every third day.

Viomycin and streptomycin were administered intra-muscularly and *p*-aminosalicylic acid orally. Duration of treatment in all patients was 120 days, except in one patient in whom drugs were discontinued because of toxic side-effects. Results suggested that viomycin is capable of exerting a favourable effect on the clinical course of pulmonary tuberculosis. The therapeutic effectiveness of viomycin was considerably less than that of streptomycin, but approximated to that of *p*-aminosalicylic acid. Viomycin combined with either streptomycin or *p*-aminosalicylic acid was superior to any of the drugs employed alone.

There was a high incidence of mild untoward reactions to viomycin, such as significant pain at the site of intra-muscular injection in 32 patients, fever in 21, and drug-rash in 14. For this reason prolonged administration beyond 120 days was impractical in the few patients in whom it was attempted. Mild renal irritation was evidenced in most patients by occasional cylindruria and slight albuminuria, which disappeared after termination of viomycin therapy. Serious 8th cranial nerve dysfunction and serum electrolyte disturbances were not observed.

The high incidence of clinical and laboratory toxicity from intermittent viomycin was predominantly minor, transient, and reversible after termination of therapy. This is in striking contrast to toxicity reported when viomycin is administered daily. It is believed that viomycin is a relatively safe drug when administered intermittently, provided its potential toxicity is appreciated and appropriate clinical and laboratory surveillance is maintained.'

Joiner *et al.* (1953): *Chemotherapy of Pulmonary Tuberculosis*, Lancet, **265**, 152.

A study, carried over a period of a year, was made to compare the action on pulmonary tuberculosis of the following: isoniazid, isoniazid-streptomycin, and PAS-streptomycin. There were from 7 to 20 patients in each group. It appears that isoniazid alone should not be used to treat chronic pulmonary tuberculosis, because although initial improvement almost always appears, relapse follows and further treatment with isoniazid is then useless. On the other hand, isoniazid given with streptomycin yields a real therapeutic effect.

The regimen here employed was 250 mg. of isoniazid per day plus 1 g. of streptomycin 6 times a week for either 18 or 25 weeks. All patients improved clinically on this treatment, with a mean gain in weight of nearly 7 lb., and a steady fall in the number of tubercle bacilli in the sputum, for the 18-week group. In the 25-week treatment group, weight gain was just under 10 lb., and the decline in tubercle bacilli was such that by the 25th week only 2 out of the 8 surviving patients still had a positive sputum. No serious toxic side-effects due to isoniazid were encountered in the series.

Clinical relapse in patients receiving isoniazid and streptomycin together appeared only after treatment was discontinued, but re-treatment with the same drugs seems to be fully effective. Most patients receiving PAS and streptomycin relapsed during treatment while no evidence of any such relapse has appeared in any patient receiving isoniazid-streptomycin. Isoniazid-streptomycin appears to the authors to be the treatment of choice for chronic pulmonary tuberculosis at this time.

DIE BEHANDELING VAN ERNSTIGE BRANDWONDE

'N VERSLAG VAN 'N METODE IN GEBRUIK TE GROOTE SCHUUR-HOSPITAAL

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As ons die verskeie metodes nagaan waarmee brandwonde in die laaste 150 jaar behandel is, kan ons tot die volgende twee gevolgtrekkinge kom:

1. Dat oppervlakkige brandwonde van 'n ligte en matige aard dikwels bevredigend genees, al gebruik ons ook watter boereraat, ontsmettingsmiddel, salf, antibiotikum of wat dies meer sy.

2. Dat, ten spyte van ons hedendaagse verbeteringe en nuwe middels, die uitslae in gevalle met strawwe diep brandwonde nog veel te wense oorlaat.

Dit is dus heeltemal verstaanbaar waarom daar so baie verskille is oor die beste manier waarmee brandwonde behandel moet word. 'n Reuse-bibliografie oor die onderwerp is alreeds opgebou en elke jaar word dosyne artikels bygevoeg.

Brandwonde is een van ons grootste probleme by Groote Schuur-hospitaal, veral onder die nie-blanke kinders. In die nie-blanke kindersaal wat slegs oor 12 algemene chirurgiese beddens beskik, word omstreeks 40 gevalle elke jaar behandel, en dié verteenwoordig maar 20% van kleurlingkinders met brandwonde wat na die hospitaal verwys word. Dit was dus hoog nodig om 'n plan te beraam waardeur die beste uitslae so gou as moontlik verkry kon word. Hierdie skema, wat grootliks op die werk van Colebrook[1, 2] en Wallace[3,4,5,7,8,9] gegrond is, is nou al twee jaar in die kinderafdeling en in twee van die ander chirurgiese sale in werking, en lewer tans die beste uitslae wat tot dusver verkry is. Die verpleegsters en huisdokters vind die werk nie te moeilik nie en die grootste waarde daarvan is dat dit in algemene chirurgiese sale toegepas word.

Pasiënte wat in ons sale opgeneem word, het gewoonlik nog nie behandeling van hulle brandwonde ontvang nie of, wat erger is, pogings was alreeds aangewend om die wonde skoon te maak voordat skok behandel is. Ons is so kort van beddens dat net ernstige gevalle opgeneem kan word. Hierdie pasiënte is dikwels erg geskok alhoewel dit in die begin miskien nie ooglopend is nie, veral in die geval van kinders. Dit word dus aangeneem dat alle volwassenes met brandwonde wat groter is as 10% van hulle liggaamsoppervlakte, en alle kinders met wonde wat groter is as 6% van hulle liggaamsoppervlakte, ernstig geskok is.

BESONDERHEDE VAN DIE SKEMA

I. VOORLOPIGE ONDERSOEK EN TOESIG

(*a*) Die pasiënt word vlugtig ondersoek om vas te stel of die vroeë tekens van skok alreeds teenwoordig is en om die grootte van die brandwond te bepaal. (Wallace[7] se reël van neges word gebruik—Fig. 1). Daar word altyd verneem hoeveel tyd verloop het sedert die brandwond opgedoen is.

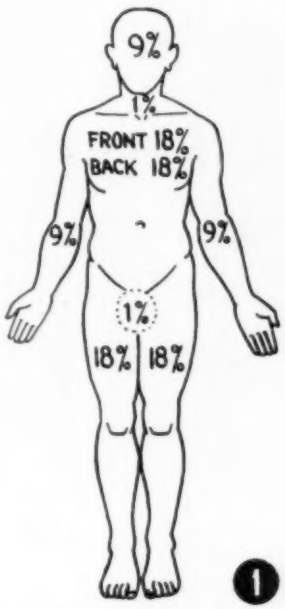

Fig. 1. Wallace[7] se „Reël van Neges" om die grootte van brandwonde te skat.

(*b*) Tetanus-antiserum word ingespuit indien dit nie alreeds toegedien is nie.

(*c*) 'n Monster word van die oppervlakte van die wond vir bakteriologiese kultuur geneem.

(*d*) Die brandwond word met 'n steriele doek bedek. Die liggaamswarmte word herstel en behou maar oorverhitting van die pasiënt word vermy.

(*e*) 'n Monster bloed word vir ondersoek geneem.

(*f*) 'n Geskikte verdowingsmiddel word toegedien—morfiene vir volwassenes en pethidine vir kinders.

(*g*) Penicillin ½ miljoen eenhede b.d. word voorgeskrywe.

(*h*) Die pasiënt word versoek om soveel vloeistowwe as moontlik te drink.

(*i*) *Die pasiënt word dan vir 'n halfuur ongehinderd gelaat om te bedaar.*

II. VOLDOENDE ONDERSOEK EN KLASSIFIKASIE

'n Deeglike ondersoek word onderneem eers nadat die pasiënt ten volle kalmeer is. Dit sluit die volgende in:

(*a*) *Algemeen*

1. Die mate van skok word bepaal en daar word vasgestel of ander beserings teenwoordig is.

2. Die temperatuur, polstelling en bloeddruk word geneem.

(*b*) *Plaaslik*. Die volgende word bepaal:

1. Presies watter dele verbrand is.
2. Die grootte van die wonde—bereken in persentasies van die liggaamsoppervlakte (Lund en Browder[5] se sketse wat op die mure van ons sale geverf is, word gebruik—Fig. 2).

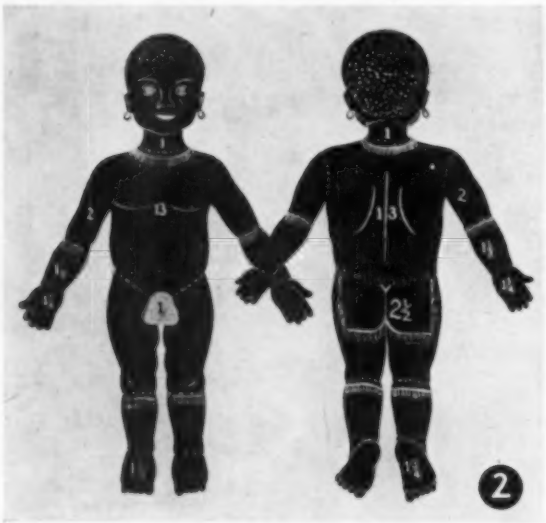

Fig. 2. Foto van Lund en Browder[5] se sketse wat op die mure van die kindersale geskilder is. Die syfers is persentasies van die liggaamsoppervlakte.

Ouderdom (jare)	*0*	*1*	*5*	*10*
½ van kop	9½	8½	6½	5½
½ van een dy	2½	3½	4	4½
½ van een onderbeen	2½	2½	2½	3

3. Die diepte van die wonde—word slegs as Diep (hele dikte van die huid) of Oppervlakkig (gedeelte van die dikte van die huid) geklassifiseer.
4. Die teenwoordigheid en graad van plaaslike edeem.

(*c*) *Spesiale ondersoek*

1. Bloed—Hemoglobien en, indien moontlik die hematokriet.
2. Urine—Hoeveelheid in die blaas en volledige chemiese en mikroskopiese ontleding.

Nadat hierdie ondersoek voltooi is word die brandwonde voorlopig as lig, matig of straf gegradueer volgens die persentasie van liggaamsoppervlakte wat verbrand is, bv.:

Graad	*Kinders*	*Volwassenes*
Ligte wonde	Minder as 6%	Minder as 10%
Matige wonde	6% tot 10%	10% tot 15%
Strawwe wonde	Groter as 10%	Groter as 15%

Alle gevalle met matige of strawwe wonde word as ernstig beskou. Die mate van skok kan egter eers bepaal word nadat verskeie ander faktore ook in aanmerking geneem is, bv. die tipe brandwond, die tyd wat alreeds verloop het, vorige pogings om die wonde skoon te maak, die dele wat verbrand is, die kliniese toestand van die pasiënt en, bowenal, die hemokonsentrasie. Nadat al hierdie faktore in ag geneem is, is dit dikwels duidelik dat selfs pasiënte wat ligte brandwonde opgedoen het, ernstig geskok is.

III. BEHANDELING VAN SKOK

Dit is die eerste vereiste in ernstige gevalle en moet aangepak word sodra bogenoemde ondersoek voltooi is. Die volgende is van belang:

(*a*) *Vloeistof-terapie*

Die belangrikste. Gedurende die eerste 72 uur is dit noodsaaklik om 'n akkurate inname en uitskeidingskaart te hou.

1. *Wyse van Toediening*. Ligte en matige wonde—vloeistowwe per mond is gewoonlik voldoende.

Strawwe wonde—Behalwe inname per mond is binneaarse infusies altyd nodig. Sover moontlik word soutoplossings en glukosewater per mond gegee.

2. *Soort Vloeistof*: Glukose-water, soutoplossing, plasma en bloed is beskikbaar. Die indeling van hierdie vloeistowwe word bepaal deur die diepte van die brandwonde en die basiese vloeistofvereistes van die pasiënt in aanmerking te neem, bv.:

Oppervlakkige brande: plasma 2 dele, soutoplossing 2 dele, bloed 0.
Diep wonde: plasma 1 deel, soutoplossing 1 deel, bloed 2 dele.
Basiese vereistes: glukose per mond of 5% dekstrose binne-aars. Dit word aangevul met lemoensap, tee, ens.
(As plasma nie beskikbaar is nie, kan dextran gebruik word.)

3. *Hoeveelheid*. Basiese Vereistes: Volwassenes kry 3000 ml. per dag en kinders volgens hulle ouderdom en gewig.

Vervangingsvloeistowwe: Die hoeveelheid verlore vloeistof wat vervang moet word kan bereken word òf volgens die persentasie area wat verbrand is, òf volgens die hemokonsentrasie. Dit word dan later gewysig volgens die vordering van die pasiënt, die hemoglobien en die urine-uitskeiding. In kinders en bejaarde persone moet groot voorsorg geneem word om nie te veel binneaarse vloeistowwe toe te dien nie. Die berekeninge is as volg:

Volgens area brandwond: Gee 2 ml/1% verbrande area/kg. gedurende die eerste 48 uur. (In kinders moet tabelle gebruik word.)

Volgens hemokonsentrasie: Die hemoglobien in gram % word elke drie uur bepaal. In volwassenes gee ons 300 ml. plasma vir elke 1 g. % wat die hemoglobien hoër as die normaal van 14 g. % is. Helfte word in die eerste uur gegee en die res in die volgende 2 uur. (In kinders is dit egter nie moontlik om die bloed elke 3 uur te toets nie en bowendien vereis die berekenings 'n kennis van die normale hemoglobien op verskeie ouderdomme, die gewig van die kind, ens.)

4. *Spoed van toediening*. Die grootste verlies van vloeistowwe geskied gedurende die eerste 8 uur nadat die brandwonde opgedoen is. Dus is dit noodsaaklik dat meeste van die vloeistowwe gedurende hierdie tyd-

perk vervang moet word. As voldoende vloeistowwe toegedien word is dit selde nodig om binneaarse infusies vir langer as 48 uur te gee; daarna kan genoeg per mond geneem word om die verdere verlies te balanseer. Vloeistowwe word dus gedurende die eerste 48 uur as volg toegedien: Eerste 8 uur—een derde. Volgende 16 uur—een derde. Volgende 24 uur—een derde.

Die spoed van die infusies word egter ook gewysig volgens die uitwerking op die algemene toestand van die pasiënt, die polstelling en bloeddruk, die urine-uitskeiding en die hemokonsentrasie. Binneaarse infusies (plasma of bloed) moet volgehou word totdat die hemoglobien onveranderd bly en die urine-afskeiding normaal is.

(*b*) *Posisie*

Terwyl die pasiënt nog ernstig geskok is, word die voetenend van die bed gelig. Daarna word die bed gelyk gehou totdat die brandwonde skoongemaak is.

(*c*) *Kalmering*

Morfiene word toegedien aan pasiënte wat rusteloos is, wat kla oor pyn of wat histeries is. Pethidine is beter vir kinders. In pasiënte wat ernstig geskok is, is onderhuidse inspuitings dikwels tydelik ondoeltreffend en daarom word die middels by voorkeur binneaars toegedien.

(*d*) *Suurstof*

Dit is van waarde alleenlik in gevalle wat baie erg geskok is of waar die lugweë aangetas is, en word teen 'n spoed van 3 liters per minuut deur 'n neuskateter toegedien.

(*e*) *Warmte*

Uitwendige hitte in enige vorm, is gevaarlik. As die pasiënt koud kry word hy met komberse warm gehou—warmsakke, verwarmers en verhittingsboë moet nie gebruik word nie. Die beste kamertemperatuur is 70—75 grade F. Hiperpyrexia word onmiddellik deur afsponsing en antipiretiese middels behandel.

(*f*) *Tonika*

Groot dosisse van vitamines B en C asook 'n ystertonikum word in alle gevalle voorgeskrywe.

(*g*) *ACTH en Kortisoon*

ACTH en kortisoon word alleenlik gebruik in baie ernstige gevalle wat nie genoegsaam met bogemelde behandeling verbeter nie. Hierdie middels is in sulke gevalle van besondere waarde en kan 'n lewe red wat andersins verlore sou gaan.

Terwyl die pasiënt vir skok behandel word, word hy onder noukeurige toesig gehou. Gedurende die eerste 8 uur word die polstelling elke halfuur geneem en daarna elke uur totdat daar verbetering is. In baie ernstige gevalle word die bloeddruk elke uur geneem vir die eerste 12 uur en daarna elke 2 tot 4 uur vir die volgende dag of twee. In volwassenes word die hemoglobien elke 3 uur bepaal en in kinders ten minste elke 12 uur. Die urine-afskeiding is een van die belangrikste aanduidings van die vordering van die pasiënt en die hoeveelhede wat afgeskei word, word dus noukeurig aangeteken—ons beoog 'n afskeiding van 50 tot 60 ml. per uur in volwassenes.

Plaaslike behandeling van die brandwonde word uitgestel totdat die skok goed onder beheer is. Dit vereis gewoonlik 'n vertraging van 4 tot 6 uur in matige, en 'n vertraging van 24 tot 72 uur in ernstige brandwonde.

IV. PLAASLIKE BEHANDELING

Die brandwonde word met 'n steriele doek bedek totdat hulle skoongemaak kan word. Indien die skok so ernstig is dat plaaslike behandeling vir 'n geruime tyd uitgestel moet word, word die blare oopgeknip en die beseerde oppervlakte met ½% ‚cetavlon' ontsmet voor die wonde bedek word. Alle voorsorgsmaatreëls word geneem om besmetting van die wonde te vermy bv. maskers word gedra, ens.

Die wonde word in 'n operasiekamer skoongemaak. Maskers, togas, ens. word gedra. Ligte algemene narkose word gewoonlik gebruik tensy die wonde baie lig is of algemene narkose nie wenslik is nie. 'n Steriele laken word onder die deel wat verbrand is, geplaas en die wond word dan deeglik met gaas wat in 1% ‚cetavlon' geweek is, gedep. Dit word van binne af buitentoe gedoen en los stukkies vel word terselfdertyd verwyder.

Omtrent 6 duim van die normale vel rondom die wonde word dan deeglik met ‚cetavlon' skoongemaak op so 'n manier dat die ontsmetmiddel nie oor die brandwond loop nie. 'n Naelborsel word soms op die gesonde vel gebruik. Die blare word dan oopgeknip en al die los vel en vog word verwyder. Die rou area word liggies met ‚cetavlon' gedep, dan met soutoplossing gespoel en daarna met gaas drooggemaak.

Die verdere behandeling hang daarvan af of die wonde deur ontbloting of deur absorberende verbande behandel gaan word. Dikwels word beide metodes in dieselfde pasiënt gebruik.

(*a*) *Ontbloting*

Nadat die wonde skoongemaak is, word hulle met 'n steriele doek bedek totdat die pasiënt terug in die saal is. Daar word die doek verwyder en die beseerde deel so ge-immobiliseer en opgelig dat die wond geheelenal aan die lug blootgestel is. Alle voorsorgsmaatreëls word geneem om te verseker dat die wonde heeltemal oop is en aan niks raak nie. Indien moontlik, word die pasiënt in 'n aparte kamer of afdeling verpleeg. Trekke word vermy en die pasiënt word warm gehou deur gesonde dele van die liggaam met komberse toe te maak. In pasiënte wat baie groot brandwonde opgedoen het word die beddegoed oor 'n hoë kombersboog getrek sodat hulle nie aan die wonde kan raak nie. Verwarmers word nie gebruik nie maar die kamer word warm gehou.

Hierdie manier van behandeling word altyd aanvaar in brandwonde van die gesig, sitvlak en perineum. Dit word dikwels gebruik waar net een helfte van die liggaam verbrand is. Soms word dit ook in ander brande gebruik, veral in warm weer, maar dit is nie geskik vir brande van die hande nie en ook nie in gevalle waar 'n liggaamsdeel rondom verbrand is nie. Dit is ons insiens die beste manier om kinders te behandel want die daaropvolgende toesig vereis nie verandering van verbande nie.

(*b*) *Absorberende verbande*

Nadat die wond skoongemaak is, word penicillin- of chloromycetinpoeier daaroor gestof. Daarna word dit

noukeurig met *tulle gras* (of ‚furacin' of ‚neomycin') bedek. Vingers en tone word elkeen apart verbind. Dan volg 'n dik laag steriele gaas wat 'n hele ent verder as die brandwond self strek, bv. in brande van die bene of voorarms word die voete en hande ook verbind. Oor die gaas word 'n laag absorberende watte geplaas en alles word dan sekuur en stewig verbind. Brandwonde van die bene of arms word soms verder deur gips beskerm. Die pasiënt word dan na die saal teruggestuur waar die verbrande deel so ver as moontlik opgelig word.

V. VERDERE TOESIG EN BEHANDELING

(*a*) *Algemeen*

Dit is uiters belangrik om te besef dat die algemene behandeling van pasiënte wat ernstige of selfs matige brandwonde opgedoen het, moet voortduur totdat die wonde heeltemal genees is.

Anemie ontstaan byna in alle gevalle en dikwels daal die hemoglobien besonder laag veral nadat die verbande verwissel is. Vervolgens word 'n yster-tonikum in alle gevalle voorgeskrywe en die hemoglobien word ten minste elke week bepaal. As die hemoglobien laer as 11g.% daal word 'n bloedtransfusie gegee en dikwels is dit nodig om elke week bloed toe te dien.

Die pasiënte se eetlus is gewoonlik baie swak en bowendien verloor hulle geweldig baie proteïne in die afskeiding van hulle wonde. Gevolglik word hulle gou swak en verloor hulle baie gewig terwyl daar ook edeem ontstaan en hulle meer vatbaar raak vir infeksie. 'n Dieet ryk aan proteïne, kalorieë en vitamines word dus voorgeskrywe en in baie ernstige gevalle word die voedings per neusbuis gegee. Binneaarse voedings met amigen of plasma word bygevoeg as meer as 20% van die liggaamsomvang betrokke is. In ernstige gevalle word 'n noukeurige inname- en uitskeidingskaart gehou om die vordering sorgvuldig na te gaan.

Antibiotika word toegedien totdat die wonde heeltemal genees het. Penicillin word van die staanspoor af gegee maar as sepsis intree word die organismes eers gekweek en 'n geskikte antibiotikum word dan gegee. Dit beteken dikwels dat ons alleenlik op chloromycetin kan staatmaak. Sulfonamiede is ook soms van waarde maar as hulle gebruik word, moet die witbloedtelling elke 5 dae bepaal word.

Verdowingsmiddels moet gewoonlik gedurende die eerste 48 uur herhaal word. Daarna is ligte kalmeermiddels voldoende, bv. chloral-hydraat in kinders.

Die pasiënte se selfvertroue word ook in aanmerking geneem. Pyn, languitgerekte behandeling en die vrees vir misvorming is almal faktore wat die pasiënte se vertroue op die proef stel en herstelling vertraag. Ons probeer dus om sover as moontlik die lyding te verminder en die pasiënte op te ruim en besig te hou.

(*b*) *Plaaslik*

Die vordering van die wonde self hang van drie faktore af: 1. Die metode van behandeling d.w.s. of die wond deur ontbloting of met absorberende verbande behandel word. 2. Die diepte van die brandwonde d.w.s. of die hele dikte van die huid vernietig is of nie. 3. Die teenwoordigheid van infeksie.

Oop wonde. Die wonde word so min as moontlik gesteur om hulle 'n kans te gee om droog te word. Soms word penicillin- of chloromycetin-poeier oor die oppervlakte gestrooi om dit gouer te laat droog. Verder word die beseerde deel stilgehou en indien moontlik opgelig terwyl die posisie van die pasiënt dikwels verander word om hom gemaklik te hou en om longontsteking te voorkom.

Die oppervlakte van die wond bly gewoonlik vir 2 tot 3 dae vogtig. Gedurende hierdie tydperk is daar 'n sekere mate van onvermydelike besmetting wat 'n effense gloed om die rant van die wond en ook koorsagtigheid veroorsaak. Alle voorsorg word egter teen vermydelike infeksie geneem, bv. die pasiënt word afgesonder en die verpleegsters en dokters dra maskers, ens.

Fig. 3. Ontblote oppervlakkige brandwonde van die gesig, nek en arms. Die wonde wat vyf dae tevore opgedoen is, is deur egalige, bruin rowe bedek.

Die verdere vordering is as volg:

1. *Oppervlakkige wonde.* Die wond is binne 2 tot 4 dae heeltemal droog en deur 'n harde ligte bruin kors bedek (Fig. 3). Dan verdwyn al die tekens van omliggende inflammasie. Die pasiënt voel gesond en die temperatuur bly normaal tensy daar 'n krakie in die kors ontstaan waardeur kieme ingang vind om effens ontsteking te veroorsaak. Na 'n week of twee begin die kors afskei. Dit word eers aan die kante los en na nog 'n dag of vier dop dit heeltemal af. Teen hierdie tyd is die onderliggende wond genees en met 'n dun laag ligrooi epiteel bedek. Die rowe word nooit afgekrap nie en nadat hulle afgeval het word die wond eenvoudig met 'n kleurstof geverf of met 'n droeë verband bedek. In sommige gevalle is die nuwe vel so dun dat dit geneig is om blare te vorm. Sulke blare word geaspireer en dan vir 3 of 4 dae met tulle gras bedek.

2. *Diep wonde.* Die vogtigheid neem langer om op te klaar—gewoonlik 4 of 5 dae. Die pasiënt se temperatuur styg dikwels tot 100° F. of hoër, sonder dat daar ontsteking is. Nietemin is daar 'n besondere groot gevaar dat infeksie wel sal ontstaan en alle voorsorg teen besmetting word toegepas. Die roof wat vorm is dikker en donkerder as dié van oppervlakkige wonde, dit is aan die onderliggende weefsels geheg en is baie geneig om te kraak. Na omtrent 10 dae vergader daar etterige vloeistof onder die kors sodat dit in dele verhewe is en sag word. Hierdie materiaal ontstaan nie noodwendig deur ontsteking nie maar as daar 'n kraak in die kors kom dan is infeksie onvermydelik. Behalwe hierdie gevaar wat in die praktyk geweldig groot is, is daar ook die gevaar van misvorming wat deur die saamtrekking van bindweefsels veroorsaak word. Diep wonde kan alleenlik van die kante af genees want daar is geen epiteel onder die korse om die oppervlakte te bedek nie; dit sal dus etlike weke of selfs maande neem voor 'n groot wond vanself sal genees. Alle diep wonde word dus so gou as moontlik met oorgeplante vel bedek om hierdie komplikasies te vermy, d.w.s. as 'n brandwond se kors na drie weke nog nie vanself afgeskei het nie, word dit verwyder en 'n veloorplanting word gedoen.

3. *Besmette wonde.* Alhoewel bakterie altyd van die oppervlakte van ope wonde verkry word, is dit maar selde dat ontsteking binne die eerste week of twee ontstaan. 'n Positiewe kultuur in sigselwe is nie van veel belang nie tensy dit 'n streptokokkus of stafilokokkus* lewer. Daarenteen, as daar kliniese bewys van ontsteking is, word stappe dadelik geneem om die infeksie te bestry.

Sodra ontsteking vermoed word, word 'n monster van die vog vir bakteriologiese ondersoek geneem sodat die geskikte antibiotika toegedien kan word. In byna al ons gevalle is die kiem 'n stafilokokkus wat alleen deur chloromycetin bestry kan word. Opgehoopte korse wat etter verberg, word elke 48 tot 72 uur met soutoplossing afgeweek waarna die wond met chloromycetin-poeier gestof en weer oopgelaat word. Dikwels is daar spoedige verbetering maar as daar nie gou beterskap is nie, word die wonde vir veloorplanting voorberei. Veloorplanting is egter nie wenslik as die ontsteking deur streptokokke of B. pyocyaneus veroorsaak is nie, en ook nie as die pasiënt baie siek is nie. In sulke gevalle word die pasiënte elke 2 tot 5 dae in soutoplossing gebad waarna die wonde met chloromycetin-poeier gestof word. Daarna word die wonde òf weer ontbloot òf met absorberende verbande verbind totdat veloorplanting wel moontlik is of genesing voldoende is.

Absorberende verbande. Verbande word so min as moontlik verwissel. Nuwe verbande word in 'n spesiale kamer aangesit waar alle voorsorg teen besmetting geneem kan word.

Die dele wat verbrand is word so ver as moontlik opgelig en stilgehou; vingers en tone word gereeld ondersoek om seker te maak dat die verbande nie te styf is nie; dele wat nie verbrand is nie word beweeg; en die pasiënt word dikwels verskuif om longontsteking, trombose, ens. te vermy.

Die verdere vordering is as volg:

1. *Oppervlakkige wonde.* Daar is gewoonlik effens koorsagtigheid vir 'n paar dae, maar kliniese ontsteking word deur penicillin vermy. Die verbande word dikwels vir 10 dae nie gesteur nie en teen die einde van daardie tyd is baie van die wonde volkome genees. As vog deur al die verbande week en die buiteverband nat word, dan word die verbande verwissel om sodoende besmetting te vermy. Kinders word gewoonlik in soutoplossing gebad om die ou verbande af te week. So 'n verandering van verbande veroorsaak soms geweldig baie bloeding en 'n bloedtransfusie word dikwels daarna gegee. 'n Monster van die afskeiding word vir bakteriologiese ondersoek geneem en nadat die wonde skoongemaak is, word hulle met antibiotikumpoeier gestof en weer met *tulle gras*, gaas en wol bedek (soms word die gaas in acriflavine-oplossing geweek en soms word ‚furacin'- of ‚neomycin'-salf i.p.v. tulle gras gebruik). Die nuwe verbande word dan nie gesteur nie totdat die wonde genees het.

2. *Diep wonde.* Die verbande word vir so lank as moontlik ongestoord gelaat tensy hulle deurweek word of tensy daar tekens van ontsteking ontstaan. 'n Effens verhewe temperatuur (wat dikwels voorkom), 'n onplesierige reuk en besoedeling van die buiteverbande deur uitwerpsels is nie juis redes om die verbande te verwissel nie. As die verbande los raak of rondskuiwe word hulle eenvoudig deur 'n laag steriele gaas en 'n nuwe buiteverband herstel.

As komplikasies nie intree nie, word die verbande eers na twee weke verander. As daar ontsteking is of as die verbande deurweek word, word daar nie uitgestel nie. Die verbande word in 'n bad afgeweek—'n kalmeermiddel is altyd nodig. (Die verbande van baie ernstige gevalle word soms in die operasiekamer onder algemene narkose verwissel). Teen hierdie tyd is die wond met rou granulêre weefsels bedek waaraan nekrotiese en etterige weefsels geheg is. Hierdie weefsels sal omtrent 3 tot 6 weke neem om vanself af te skei terwyl nuwe epiteel slegs van die kante van die wonde kan ingroei—'n proses wat etlike weke of selfs maande sal neem. Daar is dus 'n groot gevaar dat ontsteking sal plaasvind en dat saamtrekking van weefsels en misvorming sal volg as die wond toegelaat word om op sy eie te genees. Om hierdie redes is dit noodsaaklik dat die wonde met vel bedek moet word sodra dit vasgestel kan word tot watter mate die hele dikte van die huid vernietig is. Sover as moontlik probeer ons om die veloorplanting binne drie weke te voltooi maar as gevolg van onvermydelike omstandighede word dikwels versuim. Voor die veloorplanting plaasvind, word die nekrotiese weefsels òf afgeweek in daaglikse baddens van soutoplossing òf uitgesny.

3. *Besmette wonde.* Ontsteking veroorsaak pyn in die wonde en 'n styging van die temperatuur en polsspoed. Daar is ook geweldig baie afskeiding wat dikwels 'n onaangename reuk het. Die pasiënt gaan daagliks agteruit en sy bloedtelling daal vinnig.

* 'n Stafilokokkus word tans in Groote Schuur-hospitaal aangetref wat alleen vir chloromycetin sensitief is en nie deur ander antibiotika beheer kan word nie.

Wanneer infeksie vermoed word, word die verbande in 'n soutoplossing-bad afgeweek. Etter en los nekrotiese weefsels word versigtig verwyder en 'n monster word vir bakteriologiese ondersoek geneem. Die oppervlakte van die wond wat nou uit ongesonde granulêre weefsels bestaan, word met antibiotikum-poeier gestrooi en met nuwe verbande bedek. Hierdie verbande bestaan uit 'n enkele laag *tulle gras* (of ‚neomycin-salf' op gaas), 'n laag gaas wat in acriflavine geweek is, 'n tweede laag gaas en dan watte en 'n buiteverband. Terselfdertyd word 'n geskikte antibiotikum voorgeskrywe. Sodra sepsis onder beheer is word die nekrotiese weefsels verwyder en die wond vir veloorplanting voorberei. As veloorplanting egter nie wenslik is nie, word die verbande elke paar dae verander of anders word die wonde ontbloot. Dit is inderdaad dikwels nodig om 'n verandering te maak en die wonde oop te laat want herhaalde verandering van verbande veroorsaak onnodige lyding en geweldige verlies aan bloed.

VI. VOORKOMING VAN LITTEKENS, SAMETREKKING VAN WEEFSELS EN MISVORMING

Dit is selde dat oppervlakkige wonde wat onbesmet bly onaangename littekens en misvorming veroorsaak. In geval van diep en besmette wonde, inteendeel, is daar altyd 'n groot gevaar dat hierdie komplikasies wel sal volg. Maatreëls word dus van die staanspoor aangewend om hulle te voorkom, bv.:

(*a*) Die verbrande deel word in 'n funksionele posisie geplaas totdat die wonde genees is. Hierdie voorsorgsmaatreël word veral in brande van die hande en gewrigte toegepas.

(*b*) Die deel wat verbrand is word so ver as moontlik opgelig om edeem en gevolglike fibrose te voorkom.

(*c*) Diep en besmette wonde word so gou as moontlik met vel bedek want misvorming in sulke gevalle kan alleen deur tydige veloorplanting vermy word.

(*d*) Fisioterapie en aktiewe bewegings word na omtrent 10 dae begin en daarna volgehou totdat volle beweging moontlik is.

VII. VELOORPLANTING

Die volmaakte behandeling van brandwonde vereis velbedekking van die staanspoor af. Terwyl daar rou wonde is sal die pasiënt onvermydelik agteruitgaan en is daar 'n groot gevaar dat ontsteking sal plaasvind en dat die pasiënt geskend sal wees. Infeksie veroorsaak nie alleenlik toksemie nie maar vernietig ook die epiteel wat onbeskadig gebly het.

Ons probeer dus om alle rou wonde so gou as moontlik met vel te bedek. Hierdie doel kan egter maar selde binne twee weke bereik word, want dit vereis soms grootskaalse verwydering van nekrotiese weefsels en groot veloorplantings. Onbesmette oppervlakkige wonde genees gelukkig vanself binne 2 tot 3 weke sodat veloorplanting nie nodig is nie. In diep wonde, inteendeel, kan ons alleen voldoende en vroegtydige velbedekking verkry deur vel oor te plant. en ons probeer om dit binne 3 weke te voltooi.

Voordat 'n veloorplanting gedoen word, moet sepsis beheer word en alle nekrotiese weefsels verwyder word. Sepsis word beheer deur die geskikte antibiotika toe te dien en die oppervlakte van die wond met flou Eusol of soutoplossings te ontsmet. Streptokokke en B. pyocyaneus moet heeltemal uitgeroei word voor 'n veloorplanting aanvaar kan word. Nekrotiese weefsels kan deur soutoplossings, chemikalieë of ensieme verwyder word maar die allerbeste manier om gou van hulle ontslae te raak is om hulle uit te sny. Dit word gewoonlik gedoen onmiddellik voordat die veloorplanting plaasvind.

Verdeelde vel is die beste vir oorplanting op brandwonde. Antibiotika word altyd toegedien om sepsis te kontroleer en die verbande word eers na 8 dae verwyder. Daarna word òf nuwe verbande aangesit òf die wonde word ontbloot. Dit was soms nodig om meer as een veloorplanting te doen en in pasiënte met baie groot wonde was dit selfs nodig om vel van 'n familielid oor te plant. Die oorgeplante vel dek spoedig die rou area en na 2 tot 3 weke was daar dikwels volkome genesing van die wonde en net die geringste misvorming.

TABEL 1. BRANDWONDE 1 JULIE 1952 TOT 30 JUNIE 1953

	Blankes	*Nie-blankes*	*Volle getal*
Binne-pasiënte	10	44	54
Buite-pasiënte	20	222	242

Ouderdomsgroepering (binne-pasiënte).

	0—2 jaar	2—5 jaar	6—10 jaar	oor 10 jaar
Blankes	1	2	3	4
Nie-blankes	15	13	6	10

TABEL 2. ONTLEDING VAN 40 KINDERGEVALLE

(*binne-pasiënte*)

RAS	Blankes	6
	Nie-blankes	34
OUDERDOM	0— 2 jaar	16
	2— 5 jaar	15
	6—10 jaar	9
	Gemiddeld	3½ jaar
GROOTTE	Minder as 6%[1]	5
	6—10%	13
	11—15%	12
	16—30%	9
	Meer as 30%	1[1]
	Gemiddeld	14%[1]
DIEPTE	Oppervlakkig	23
	Diep	5
	Gemeng	12
KLINIESE INFEKSIE	Stafilokokke	12
	Streptokokke	2
	B-pyocyaneus	2
	Gemeng	12
	Totaal	28

ANTIBIOTIKUM-SENSITIWITEIT	Alleenlik chloromycetin	15
	Penicillin, streptomycin, ens.	13
	Totaal	28
PLAASLIKE BEHANDELING	Ontbloting	16
	Absorberende verbande	17
	Beide ontbloting en verbande	7
	Veloorplanting	20
VERBLYF IN HOSPITAAL	Minder as 2 weke	5
	2—4 weke	9
	1—2 maande	16
	Meer as 2 maande	10
	Gemiddeld	7 weke
UITSLAG	Sterfgevalle[3]	1
	Verminking	2
	Bevredigend, d.w.s. weinig misvorming	37

1. Persentasie van die liggaamsoppervlakte.
2. 65% diep brandwonde.
3. Dood aan skok 10 uur na toelating.

BESPREKING EN GEVOLGTREKKINGS

Besonderhede van pasiënte wat gedurende die tydperk 1 Julie 1952 tot 30 Junie 1953 te Groote Schuur-hospitaal vir brandwonde behandel is, word in Tabelle I en II opgesom. Hieruit blyk dit dat die groot meerderheid van ernstige brandwonde in klein nie-blanke kinders voorgekom het. Meeste van die wonde het ontstaan deur die agterlosigheid van die ouers—kookwater, tee, koffie, pap en oop vure was die belangrikste oorsake.

Al die kindergevalle wat toegelaat was, was ernstig en meeste van hulle het binne-aarse vloeistowwe nodig gehad. ACTH was net in 2 gevalle gebruik. Een van hulle, 'n nie-blanke kind van 5 jaar wat 30% diep brandwonde opgedoen het, het 10 uur na haar toelating beswyk. Die ander een, 'n blanke seun van 10 jaar wat 65% diep brandwonde gehad het, het herstel.

Die waarde van verdere algemene behandeling en bloedoorgietings was in al die gevalle besonder ooglopend en het ongetwyfeld die genesing van die brandwonde verhaas. Dus was vitamines, ystertonika en 'n dieët ryk aan proteïne vir almal voorgeskrywe terwyl die bloedtelling deur herhaalde bloedoorgietings normaal gehou is.

Kliniese ontsteking het skynbaar te dikwels voorgekom maar die onhigiëniese gewoontes van die kinders was grotendeels daarvoor verantwoordelik—ontlasting en urine kon maar nie deeglik van die wonde en verbande weggehou word nie. Dit was juis een van die redes waarom ons liewers die wonde oopgelaat het.

Die kiem wat die meeste moeilikheid veroorsaak het was 'n stafilokokkus wat alleenlik vir chloromycetin sensitief is. Hierdie kiem, wat stellig in die hospitaal verkeer, was in meer as die helfte van die septiese wonde teenwoordig en het ons verplig om plaaslike chloromycetin-poeier i.p.v. penicillin-poeier te gebruik. Die poeier het gewoonlik die sepsis binne korte tyd beheers.

Die brandwonde was ewe dikwels deur ontbloting en verbande behandel. Daar was nie juis 'n groot verskil in die uiteindelike uitslae nie en die verpleging in albei metodes was veeleisend. Wonde van die gesig en perineum het baie beter sonder verbande genees, terwyl wonde wat 'n liggaamsdeel omring het, verbande vereis het. In warm weer het ons verkies om die wonde oop te laat maar in baie koue weer was ons verplig om hulle te verbind. Besware teen die gebruik van verbande in kinders is dat hulle so dikwels besoedel geraak het en dat verwisseling veel pyn en ook bloeding veroorsaak het. Daar was ook besware teen ontbloting, nl. dat die rowe dikwels gekraak het omdat die kinders so woelig is en dat die kleinspan alte graag die rofies afgekrap het.

Oor die algemeen, egter, het die klein kinders baie beter gevorder wanneer ons hulle wonde oopgehou het, en ons het dikwels 'n groot verbetering bespeur kort nadat 'n wond wat tevore verbind was, ontbloot is. Ons is tans geneig om aan te beveel dat brandwonde in kinders oopgehou moet word op voorwaarde dat die verpleging van so 'n gehalte is dat die metode behoorlik uitgevoer kan word. In volwassenes, veral in vrouens, gee ons voorkeur aan absorberende verbande.

Vel was in die helfte van die gevalle oorgeplant en as omstandighede dit toegelaat het sou ons nog meer veloorplantings gedoen het. Die verbetering wat kort op 'n oorplanting gevolg het, was altyd besonder ooglopend. Dit het nie alleen die genesing van die wonde baie verhaas nie maar die algemene toestand van die pasiënte het ook spoedig verbeter. Misvorming was grootliks vermy en die verblyf in die hospitaal verkort. Ons is daarvan oortuig dat tydige veloorplantings van die grootste waarde in die behandeling van brandwonde is, en dat enige neiging om daarmee te versuim ten strengste afgekeur moet word.

SAMEVATTING

Die besonderhede van 'n metode waarmee ernstige brandwonde te Groote Schuur-hospitaal behandel word, is beskrywe.

Die onmiddellike behandeling van skok word beklemtoon en daar word aangedui dat wonde wat groter is as 10% van die liggaamsoppervlakte van volwassenes en 6% van die oppervlakte van kinders, as ernstig beskou moet word. Vloeistof-terapie en ander middels om skok te bestry word beskrywe.

Daar word op gewys dat die wonde in 'n operasiekamer en onder algemene narkose skoongemaak moet word. Plaaslike behandeling deur ontbloting en met absorberende verbande word beskrywe. Ontbloting word verkies in die behandeling van kinders.

Die verdere toesig word bespreek, die waarde van algemene behandeling en bloedoorgietings word aangetoon, die bestryding van ontsteking word verduidelik, maatreëls om littekens en misvorming te vermy word beskrywe, en die waarde van veloorplanting in gevalle met diep en besmette wonde word beklemtoon.

Besonderhede van pasiënte wat gedurende 'n tydperk van een jaar behandel is word kortliks bespreek, en dié van 40 kindergevalle word ontleed. Die sterftesyfer in hierdie reeks was 2% en die gemiddelde verblyf in hospitaal was 7 weke. Onder dié wat herstel het was

'n seun van 10 jaar wat diep brandwonde op 65% van sy liggaamsoppervlakte opgedoen het. Met behulp van bloedoorgietings, ACTH en verskeie veloorplantings is hy nou gesond en maar weinig geskend.

Ten slotte word daar weereens nadruk op die besonder groot waarde van veloorplantings gelê.

SUMMARY

A method of managing serious burns which is in use at Groote Schuur Hospital has been described.

The prompt treatment of shock is emphasized and it is suggested that burns exceeding 10% of the body surface of adults and 6% of the surface of children should be regarded as serious. Intravenous therapy and ancillary methods of treating shock are described.

It is pointed out that the burns should be cleansed in an operating theatre and that general anaesthesia should be used. Two methods of local treatment, *viz.* exposure and absorbent dressings, are described. The exposure method is preferred in children.

The value of general treatment and repeated blood transfusions is noted, the subsequent care is outlined, the control of infection is discussed, precautionary measures against scarring and deformity are described and the value of grafting deep and infected burns is stressed.

Details of patients treated over a period of one year are briefly discussed and 40 cases in children are analysed. The mortality in this series was 2% and the average stay in hospital was 7 weeks. The survivors include a boy of 10 years who sustained deep burns covering 65% of his body surface. With the aid of blood transfusions, ACTH and repeated skin grafts he is now well, with minimal deformity.

In conclusion the great value of early skin grafting is re-emphasized.

Graag spreek ek my waarderende dank aan lede van my personeel en die verpleegsters uit vir die manier waarop hulle die pasiënte behandel het, en vir die belang wat hulle in hierdie besondere gevalle gestel het. Ek wil veral vir dr. Herman Claassens, my senior huisdokter, en stafverpleegster Terblanche hartlik bedank vir hulle belangstelling in die voorbereiding van hierdie verslag.

Die plastiese chirurge, dr. N. Petersen en D. Davies, het ons besonder baie met veloorplantings gehelp, en ons stel hulle samewerking hoog op prys.

Ek is dank verskuldig aan dr. de Wet, Mediese Superintendent van Groote Schuur-hospitaal, vir sy toestemming om hierdie verslag te publiseer.

Die geleentheid om dr. Wallace van Edinburgh te ontmoet en sy werk i.v.m. brandwonde na te gaan was deur middel van 'n Nuffieldbeurs verskaf.

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SERUM CHOLINESTERASE ACTIVITY AND PROTEIN-BOUND IODINE FLUCTUATIONS DURING THERAPY OF A CASE OF NEPHROSIS

by

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The case recorded here is reported because of two interesting and unusual investigations—serum cholinesterase activity and protein-bound iodine (PBI)—which are correlated with the profound alterations in protein and fat metabolism occurring during therapy with cortisone and ACTH. These drugs have produced marked clinical improvement in 50—75% of cases of nephrosis[1-8] with dramatic reversal in the marked metabolic changes which occur in this disease.

The most adequate working definition of the nephrotic syndrome in children when it does not occur in association with certain recognized disorders would appear to be that of Barnett, Forman and Lauson.[4] They define nephrosis as a 'single distinct disease-entity which is not preceded by recognized acute glomerulonephritis, and in which the definitive signs of edema, proteinuria, hypoproteinemia, hypoalbuminemia and hyperlipemia may or may not be accompanied by persistent signs of hematuria, hypertension, or reduced kidney function'.

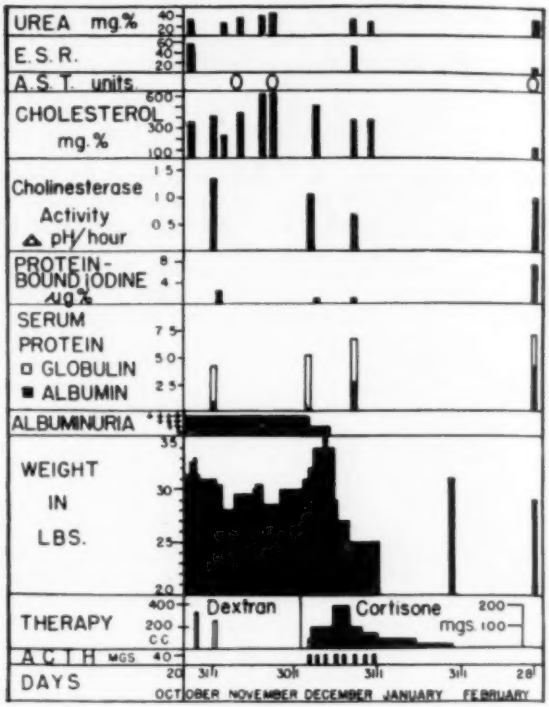

Fig 1

CASE REPORT

E.J.C., European male aged 3 years, was admitted to hospital on 20 October 1952 with a history of intermittent generalized oedema for 2 months and fluctuating pyrexia. On admission the child was pale, with puffy eyes. Temperature 102°F., pulse rate 88 per minute, blood pressure 130/80 mm. Hg. The tonsils were slightly enlarged but not infected. The thyroid gland was palpable but not obviously enlarged. Clinical examination of the heart, lungs and central nervous system revealed no abnormality. The liver and spleen were not palpable. The abdomen contained a little free fluid, and the hands, legs and feet were puffy, and pitted on pressure. The urine was loaded with protein but no red cells or casts were found. The blood leucocyte count was 19,900 per c.mm. and the erythrocyte count 4.86 million.

The biochemical findings are summarized in the chart (Fig. 1) and Table I.

The pyrexia subsided slowly over several days, during which time 300,000 units of 'crysticillin' were injected twice daily, the patient then remaining apyrexial until the end of his stay in hospital. Intravenous dextran was given twice at an interval of a week, and resulted in some diuresis and the loss in body-weight (Fig. 1). There was, however, no clinical improvement and on 5 November, 5 days after the second dextran injection, a marked haematuria occurred for the first time, oedema returned, and the body-weight again increased. The haematuria gradually subsided over the next 21 days, but the oedema increased, and ascites and scrotal swelling appeared. On 5 December therefore, treatment with cortisone and ACTH was begun. During the next 10 days, on an oral dose of 25 mg. cortisone 6-hourly, the body-weight increased. The dosage was then doubled to 50 mg. 6-hourly, and within 24 hours there was a marked diuresis accompanied by a striking clinical improvement. Although the sedimentation rate and plasma cholesterol remained elevated for some time, the albuminuria ceased abruptly and there was an increase in the serum albumin concentration and a simultaneous decrease in cholinesterase activity. It is noteworthy that at this stage the serum protein-bound iodine (PBI) level remained low and an attempt is here made to correlate this finding with the persistently raised plasma cholesterol. With complete recovery both these

TABLE I: BIOCHEMICAL CHANGES IN THE BLOOD DURING THERAPY

Date	*Blood Urea mg. %*	*Erythrocyte Sedimentation Rate (ESR) Wintrobe mm./hr.*	*Plasma Total Cholesterol mg. %*	*Serum Cholinesterase Activity Δ ph/hr.*	*Serum Protein Bound Iodine (PBI) mg. %*	*Serum Protein g. %*			*Cortisone°: Daily Dose, No. of Days*
						Total	*Albumin*	*Globulin*	
1952									
Oct. 22	30	54	335						
Nov. 1				1.34	2.8	4.3	0.7	3.6	
Nov. 4	24		395						
Nov. 11	33		225						
Nov. 18	38		405						
Nov. 22	42		660						
Nov. 24			660						
Dec. 5									100 mg. 10 days
Dec. 6			502	1.05	1	5.2	0.5	4.7	
Dec. 15									200 mg. 5 days
Dec. 20									100 mg. 5 days, then 75 mg. 5 days
Dec. 23	31	50	365	0.68	1	6.7	2.8	3.9	
Dec. 30	27		365						50 mg. 14 days
1953									
Jan. 14									25 mg. 14 days
Feb. 28	36	10	120	0.97	8.0	7.3	4.0	2.3	
Reported Normal Ranges	15—40	0—10	120—250	Approximately 0.70—1.0	3—6	6.0—8.5	4.0—5.5	1.5—3.5	

* ACTH 40 mg. twice a week also given from 5 December (8 injections).
Antistreptolysin titre (AST) units *nil* throughout: reported normal range 0—200.

features returned to normal. While on cortisone therapy the patient was given 40 mg. of ACTH intramuscularly twice a week until discharge from hospital 25 days after cortisone was commenced. A maintenance dose of 50 mg. cortisone daily was continued for 2 weeks after discharge and 25 mg. daily for 2 weeks more. Convalescence was uneventful except for a brief recurrence of proteinuria during an attack of chicken-pox which developed 2 weeks after discharge from hospital.

DISCUSSION

Several groups of workers have shown that cortisone and ACTH will produce a diuresis in cases of nephrosis. Thorn *et al.*[18] state that these drugs are probably the most effective agents available at present for the induction of a substantial diuresis. Metcoff *et al.*[13] suggest that ACTH diuresis may not be the result of simple haemodynamic adjustments, and consider that the mechanism of oedema-formation and ACTH-induced diuresis in these children remains obscure. Luetscher, Deming and Johnson[11, 12] have measured the sodium-retaining action of the corticoid fraction of urine by bio-assay in adrenalectomized rats. They have shown that this is considerably increased in patients with nephrosis and oedema, but that the activity is reduced after cortisone therapy when diuresis follows, and also during ACTH administration. It is, therefore, possible that cortisone and ACTH exert their beneficial effect by establishing a normal balance of the various groups of steroids and restoring the internal homeostasis of the body. Since the stage is set for diuresis by the increased glomerular filtration-rate produced by cortisone and ACTH[9] and the reduced loss of protein, the rejection of sodium by the renal tubules may provide the last necessary element for diuresis.[12]

That the beneficial action of these drugs is not entirely due to their diuretic effect is evident from the continuation towards normal of the blood chemistry after the diuresis is complete. Evidence of the potent metabolic effects of cortisone and ACTH is provided in Fig. 1 and Table I, in which are shown the profound changes in cholesterol, albumin and globulin, PBI and cholinesterase activity which followed treatment. The serum cholesterol decreased slowly after commencement of therapy with cortisone, and the correlation of this finding with the changes in serum-PBI level is discussed below. Soshea and Farnsworth[16] recorded that 3 out of 6 patients with nephrosis showed a significant decrease in serum cholesterol following ACTH. Five out of 6 patients, however, showed a marked decrease in neutral fats. They consider that the most plausible reasons for the considerable increases in the various serum-lipid fractions in nephrosis are (1) decrease in tissue deposition and (2) increase in mobilization, but they offer no explanation of the mechanism responsible for the abnormal lipid metabolism. That the effect of cortisone and ACTH on the serum cholesterol in nephrosis is secondary to its beneficial effect on the disease itself is supported by the finding of Adlersberg *et al*[1] that cortisone produced a gradual increase in total cholesterol in a variety of conditions, whereas it produced a sharp decrease in neutral fat. The changes in cholinesterase and PBI are worthy of more detailed comment.

Cholinesterase Activity, Faber[7] showed that the concentration of plasma cholinesterase increased with proteinuria, and in such cases the increase in cholinesterase activity is accompanied by a decrease in serum albumin. Since both albumin and cholinesterase are produced in the liver, Faber suggests that they are dependent on each other in their rate of formation, and when the formation of albumin is increased owing to loss in the urine, more cholinesterase will also be formed. Since (as is stated) cholinesterase is only excreted in the urine in negligible amounts the serum cholinesterase level increases. Faber thus accounts for the paradoxical *rise* in cholinesterase activity with a *fall* in serum albumin. This is in contrast to the findings in liver disease, where the cholinesterase activity *decreases* with a decreased serum albumin. Kunkel and Ward[10] support these observations of Faber and state further that the hypernormal levels of plasma esterase in nephrosis reflect a general response on the part of the liver to regenerate albumin more rapidly as a result of the loss of albumin in the urine.

The demonstration in Fig. 1 and Table I that the cholinesterase activity determined by the procedure of Michel[14] is raised above normal levels (to $\triangle$ pH 1.34) at the height of the illness, when the serum albumin level is very low and the loss of albumin in the urine is very large, supports the conclusions of Faber and Kunkel and Ward. The decrease in cholinesterase activity (to $\triangle$ pH 1.05) at the same time as the albuminuria decreases from 4+ to 2+, and the further drop (to $\triangle$ pH 0.68) a few days later, shortly after the cessation of albuminuria, is evidence in favour of a decrease below normal in the liver production of cholinesterase at this time. On Faber's hypothesis, this could be due to a depression in the production of albumin by the liver, brought about by the termination of the albuminuria. Another explanation, however, is offered by the work of Bardawill *et al*,[2] who showed that cholinesterase activity, estimated by a different technique, was decreased by ACTH. This effect of ACTH in their cases may, however, have accompanied liver damage since two of their patients became jaundiced during therapy, and as recovery from the jaundice occurred, the cholinesterase activity increased. Our results support the suggestion of Bardawill *et al*. Reference to Fig. 1 and Table I shows that the cholinesterase activity is decreasing while the albumin is increasing, but it is not possible to determine whether this is due to ACTH alone, or to ACTH and cortisone. Two months later the concentration of serum albumin has returned to normal and this is accompanied by a normal serum cholinesterase level ($\triangle$ pH 0.97).

Serum Protein-Bound Iodine (PBI). This was determined by a slight modification of the method of Barker *et al.*[3] (Bloomberg and Lazarus[5]). The very low serum PBI levels present in this patient confirm the findings in cases of nephrosis of previous investigators.[15, 6] Different explanations for this phenomenon have been offered. Peters and Man[15] considered that in their patients, in whom PBI was found to be as low as in myxoedema, there was no clinical evidence of thyroid deficiency, and they were unable to find any confirmation for the suggestion that protein deficiency, which regularly

leads to a reduction in basal metabolism, is responsible for a low production of thyroid hormone. They discuss the evidence for the low PBI being due to a deficiency of serum albumin, and mention that the loss of PBI, combined with protein in the urine, might contribute to the serum iodine deficiency. Barnett *et al*[4] quote several reasons for their opinion that patients with nephrosis are not hypothyroid despite the fact, that the serum PBI may be as low as in severe myxoedema. They consider that the low PBI level is a consequence of the glomerular lesions which permit the escape of protein in the urine. Taurog and Chaikoff[17] support this suggestion by stating that the albumin fraction is the largest carrier of iodine because it constitutes the largest fraction of the plasma proteins, but they recall that the plasma iodine is not confined to a single plasma protein fraction and that albumin and α-globulin and, probably to a lesser extent, β-globulin share in binding the so-called 'protein-bound-iodine' of plasma. In fact although the albumin carries the greatest quantity of PBI, the concentration appears to be greatest in the α-globulin fraction.

Peters and Man,[15] while emphasizing the technical difficulties in measuring the iodine attached to urinary protein, state that the quantities of iodine lost in 24 hours, (16—48 μg.) are far smaller than the hormonal requirements of normal individuals estimated from the amounts of thyroid substance or thyroxine needed to maintain a patient with myxoedema in a euthyroid state. They conclude that, although losses of iodine accompanying protein in the urine may contribute in nephrosis to the depletion of precipitable serum-iodine, they cannot be wholly accountable for it. Our findings throw doubt on the contention of Barnett *et al.*[4] that the low serum PBI is due to loss in the urine combined with the protein. Reference to Fig. 1 and Table I shows that in our patient the serum PBI *does not* follow the changes in serum proteins and the cessation of proteinuria. It is low after albuminuria has ceased, suggesting that loss of thyroid hormone in the urine may not be the explanation for the low level in the serum. It is possible, however, that it may be due to the administered cortisone. A decrease in the level of PBI during cortisone therapy has been reported by Wolfson *et al.*[19] and by Hardy *et al*,[8] and it will be noted from Fig. 1 and Table I that the serum PBI reached its lowest level after cortisone therapy was commenced. The patients reported by Wolfson *et al*, however, had prolonged cortisone treatment and the levels of PBI are not quoted. We consider that our very low PBI result coupled with the persistently high plasma-cholesterol concentration at this time suggests possible hypothyroidism. Emerson *et al.*[6] conclude that the metabolic orientation of the nephrotic patient is in the direction of the conservation of fat. To this end they consider that the circulating thyroid hormone is decreased.

From the above discussion it is evident that no generally accepted explanation is as yet available for the low PBI level in nephrosis. Functional depression of the thyroid gland, perhaps as part of a polyglandular dysfunction, has in our opinion not yet been excluded, the hypothyroidism being associated with a dysfunction in the metabolism of fat. In the present case the changes in concentration of serum PBI closely paralleled the changes in cholesterol concentration. While the cholesterol level remains high, the PBI remains low. After recovery, the decrease of cholesterol to normal is accompanied by an increase of PBI to normal.

SUMMARY

A case of nephrosis in a child aged 3 years is recorded. Clinical recovery following treatment with cortisone and ACTH was accompanied by a dramatic reversal of the marked metabolic changes which occur in this disease (Fig. 1 and Table I). With the onset of diuresis as shown by rapid loss of body weight the albuminuria ceased abruptly, there was an increase in the serum albumin concentration and a gradual return of the A/G ratio to normal. The serum cholinesterase activity which was initially raised above 'normal' levels decreased rapidly below normal as the serum albumin level rose with cortisone therapy. An attempt is made to correlate the fluctuations in cholinesterase activity with the liver function in nephrosis and the effects of cortisone. In contrast to cholinesterase, the level of the serum protein-bound iodine (PBI), which was initially markedly below normal, appeared to be associated with cholesterol rather than with protein metabolism or proteinuria. The significance of this finding is discussed and it is suggested that the persistently low PBI following cessation of the albuminuria indicates that the loss of thyroid hormone in the urine attached to protein may not be the explanation for the low serum PBI. Its association with a persistently high serum-cholesterol level is in favour of a hypothyroid state.

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SOME COMMENTS ON BED-WETTING*

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In commenting on enuresis it is gratifying to know that one cannot be accused of speaking on a dry subject.

Enuresis is the unintentional emptying of the bladder during sleep after the third year of life. It is a manifestation of a general regression to an infantile mode of behaviour. A doctor's reputation is often lost in the endeavour to treat this troublesome and obstinate affliction. It is indeed a bugbear in one's practice. Enuresis is one of the commonest functional disorders met with in children. Its complete explanation is no simple matter.

The *irritable bladder* is the commonest met with in true enuresis and I shall focus my attention mainly on this type.

Enuresis is a symptom, not a disease. It is not a monosymptomatic manifestation but always combined with the expression of emotional maladjustment. A large number have a neuropathic constitution. One can usually trace a familial recessive hereditary factor. There seems to be in many a family tradition of enuresis.

The condition usually dates from birth. Both sexes are equally affected and it is more prevalent among the white population.

The modern view is that enuresis is an *achalasia* of the detrusor muscle of the bladder. Some observers believe that there is an abnormal excess of urinary secretion at night—*nocturnal polyuria*.

Deep sleep—*hypersomnia*—was at one time held as a potent factor but is no longer so regarded. The enuretic's slumber is no more profound than that of his dry colleague who holds a substantial quantity of urine in his bladder in the morning.

In some enuretics a curious reversal of normal urinary concentration has been observed, viz a *lighter* instead of a heavier specific gravity during the night.

It has been proved conclusively that the pH of the urine has nothing to do with enuresis. That in some enuretics the cause was due to *nervous immaturity* is shown by abnormal electroencephalographic studies.

There is an important type of bed-wetter which must be mentioned namely the *factitious* enuretic. He is a *voluntary* bed-wetter. He does it out of spite or to attract attention. He may be too lazy to get out of bed or finds the toilet is out of the way, the bedroom too cold, or he fears the dark. These queer children glory in the habit. It is an *attention-getting* mechanism to monopolise the mother.

PROPHYLAXIS

In infancy the *verbal tie-up* with passing of water is significant. It expresses the stage in development the child has reached. The normal child learns *backward*. At first he points out the puddle or wet pants *after* the act. Later he tells verbally *during* the act. Finally he tells *before* the act. In infancy micturition is brought about by a lower arc reflex. Proper training is a *sine qua non*; but do not commence when the infant is too young, for it only leads to tension. At 9 months place him on a chamber every 3 hours and before each feed. By 13 months normal bladder control is established. At 18 months the child is dry in the day. At 2 years he is dry in the night.

The usual time of wetting is 2 hours after going to sleep. The child should be held out and should be completely awakened. He may need cold water cloths applied to the face. Punishment and shaming works in the wrong direction. Always praise successes and reward improvement. For the doctor to say that 'the child will grow out of it' is a bad slogan. Bed-wetting should not be left to cure itself with the slow passing of years. Not the least of the doctor's rewards is the gratitude of the parents when the child ceases to be an offence to himself and his human contacts.

The child must learn alertness, to awaken sharply and be snappy about going to the toilet. The desire to be dry must be firmly planted in the child's mind. Bladder sphincter control exercises during the day such as *start-stop-start* are excellent. The enuretic must avoid fatigue and should rest in the afternoon for an hour or two. The navy has its own 'disciplinary' method for which success is claimed in curing sea cadets who are bed-wetters. It consists in making them sleep in strung-up hammocks—one above the other. New bed-wetters are placed on the *bottom* hammocks. Next morning, on inspection, if their hammocks are dry underneath, they rise by one in the manner of a ladder competition. When they reach the top they graduate to ordinary bunks.

In the first 2 or 3 years it is best for the mother to take care of the child's training, but from the age of 3 it is better for the father to handle the situation. The school teacher must co-operate and be reasonable when the child raises her hand to leave the class-room. Legend has it that the Statute of Liberty, in New York harbour, is completely surrounded by water because she held up her hand but her teacher did not notice it! It is wise to say to the child before retiring 'You will be *dry* tonight'. Don't use the word 'wet'; it has a negative effect.

Dreams may play a part. The child dreams that she is in the lavatory and busy emptying her bladder or he dreams that he is a fireman. There is a huge fire and he is busy with his *hose* putting out the flames!

PROGNOSIS

The affliction usually disappears spontaneously round about puberty. In females, with the commencement of

* A paper read at the First Paediatric Congress, held in Durban, 20 August 1953

menstruation the enuresis stops at once. She addresses her subconsciousness thus: 'I am a woman now and must put away all childish folly'. Males stop about the same time or at the latest before marriage.

Enuresis almost always clears up by itself. Credit should go to the passage of time and not to the last drug or gadget which has been tried.

TREATMENT

First and foremost treat the mother. When interviewing the bed-wetter for the first time, get the story from the mother and child separately. The weapons in the doctor's armoury for the control of enuresis have changed but little in the last 50 years. The multiplicity of treatments employed is evidence of their failures. There is no panacea for bed-wetting. No two enuretics are alike. Each is a law unto itself. Raising the foot of the bed my help some. Exclude worms as a factor. A calendar with gold and black stars may be useful. In many cases removal of tonsils and adenoids, where indicated, cured the condition. Belladonna is helpful for parasympathetic imbalance of the detrusor muscle of the bladder. Amphetamine sometimes lightens sleep and should be given last thing at night (5 mg.). A cotton-reel fixed to the back, or testosterone, may help some sufferers. In a small number of enuretics allergy plays a part. They may be allergic to pork, feathers, or horsehair and the condition clears up on their withdrawal. But the best of all is to re-educate the parents and child.

In the enuretic we almost always find a great deal of emotional tension. This emotionalism is of paramount importance in understanding the affliction. Pronounced parental neuroticism and domestic maladjustment often prevail. 'Parent-pecking'—a prototype of 'hen-pecking'—is a common finding. It is a question of correct psychological approach. The degree of success is in direct ratio to the confidence of the child in the doctor and the faith of the doctor in his own treatment whatever it may be. Success is obtained when the child learns better cerebral control. Correct any faulty environment. Because of its diuretic effect taboo tea or else, in the language of the electrocardiogram, you may get a premature P after T! The same applies to coffee and cocoa.

No fluids should be given after 4 p.m. The supper should be dry. Put him on the chamber at 8 p.m. just before he goes off to sleep. Pick him up again before the usual time known for wetting. He should be held out preferably by his father. Reduce nervous tension and promote self-confidence. Change of surroundings is an excellent procedure. It gets the child away from the mother against whom he has built his enuretic defence.

When a bed-wetter is dry you will hear him singing in his cot, but when he is wet there is dismal silence. See that the child's bowels have moved well that day. This is most important. It is expecting too much for an enuretic to have a dry bed if a loaded rectum is pressing and tickling his irritable bladder. In some enuretics we find a salted sandwich before sleep reduces urinary secretion during the night.

A number of apparatuses have been introduced to *condition* against bed-wetting. The alarm clock helps some of the milder cases. An electric bell rings when the child wets a specially constructed pad on which he sleeps. The circuit is closed by the slightest expulsion of urine and gives the alarm. The poor fellow *shoots* out of bed with fright. Other conditioning devices release a stream of cold water or a blast of air when the child starts to wet. Some even go further: They seal the external urinary meatus with collodion or tie up the penis. These methods are clever but not very popular with the patient.

Comments: Do not restrict the mental horizon of the enuretic to his bladder, nor make the toilet a battle-ground. The child is more important than his functional disorder.

SUMMARY

A positive approach is the best policy. Radiate complete confidence. There must be less 'babying' and less emotionalism. The child must learn confidence and self-respect. If these methods fail after a few months of serious endeavour there is every likelihood that uropathology exists and the child should be referred to a uro-surgeon for a thorough overhaul. Retrograde and intravenous pyelography, as well as cystoscopic examination will reveal any gross anatomic abnormalities. The importance of a careful chemical and microscopic urinary analysis is often overlooked. The constant appearance of red or white corpuscles in the urine would point to an organic lesion.

In conclusion, a brief description of a boy aged 9 cured of bed-wetting will bring out some of the points stressed:

This enuretic was an only child of a hospital sister. She had been to several doctors and tried numerous drugs without success. She could never send him to friends for a holiday because of his weak bladder. I questioned the mother in the following manner:

Q. 'Do you hold him out before he goes to bed?'
A. 'Yes, of course'.
Q. 'Where do you keep his chamber?'
A. 'Under his bed'.
Q. 'When you hold him out do you take him out of his bed or do you get him to stand up in his bed and hold the chamber underneath him?'

A. 'I stand him up in his bed, and although he is fast asleep he passes water in the chamber but he is sopping wet next morning. I wouldn't take him out of his warm bed and let him catch cold'.

I explained that this method was bad. It actually teaches the child to pass water in his bed and thus perpetuates the habit. There must be no association whatsoever between passing water and his bed. I advised her to proceed and verbalize as follows: 'My son, I know you want your bed to be dry and it is going to be dry. I shall wake you about 11 or so before dad and I go to bed. You will put on your slippers and dressing-gown and walk with me to the corner of the room, where I shall place the chamber and there you will pass water'.

A month later this woman came back beaming with delight. 'You have cured him', she said. 'Your advice acted like magic, but I must tell you something funny. When I took him out of his bed he was dry and I walked him across the room with gown and slippers to the chamber which was against the *middle* of the wall because there was a wardrobe in the corner. 'No, Mummy, not here', said my son. 'And why not?' I asked. 'Because the doctor distinctly said I must pass water in the *corner* of the room'. 'But, my child, there is a wardrobe there'. I can't help that', said he. 'Those were the doctor's orders'. I called my husband, we shifted the wardrobe, and placed the chamber in the corner. He then passed water and has been dry ever since.'

ENDEMIC SYPHILIS IN A SOUTH AFRICAN COLOURED COMMUNITY

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It is becoming increasingly realized that there are forms of syphilis which are neither venereally acquired nor congenital in origin. There is an endemic form of syphilis which occurs in the Balkans, recently the object of a WHO sponsored campaign.[1] There is 'bejel', a disease found among the Arab peoples of the Middle East.[2] In Southern Rhodesia [3] and Bechuanaland [4] a disease known as 'novjera' has been described. Some writers had suggested that these non-venereal forms of spyhilis, which exist in a few isolated 'pockets' in the world, were distinct disease entities, although caused by the same organism as venereal syphilis[5]; that is to say, diseases of the same order as yaws or pinta. It is now thought that they are merely another form of true syphilis, an endemic form that can exist any where where there are conditions conducive to its development.

These conditions are (*a*) a high proportion of syphilis of any sort in the population, and (*b*) poor and insanitary living conditions.[1] Both these conditions are to be found in South Africa and a recent editorial in this journal [6] drew attention to the possibility of the occurrence of this type of endemic syphilis among the Bantu of this country. The same thought has been in the writer's mind for the past few years, though it is to the Coloured people, rather than to the Bantu, that his attention has been drawn in this connection. From clinical work among these two cultural groups in an area where they are living side by side, but with their own completely distinct social and cultural patterns, it is strikingly apparent that the Coloured people are, in this particular district, far more a prey to syphilis than are the Bantu, a circumstance not surprising when their standards and habits of living are investigated.

MANIFESTATIONS OF ENDEMIC SYPHILIS

While acting during the past few years as Honorary Medical Officer for a Child Welfare Society in a Coloured location attached to a small country town in the Eastern Cape Province, the writer witnessed what appeared to be an epidemic of non-venereal syphilis among the children living there. The clinical and epidemiological manifestations seen among these people appear to be no different from those described as occurring in Bosnia, Arabia, Southern Rhodesia or Bechuanaland. The main features of endemic syphilis in these areas, and as seen by the writer in this instance, are as follows:

1. It is principally a disease of childhood, though all ages may be affected.

2. It occurs where there is a high syphilis rate and poor hygienic standards.

3. Its infectious nature is suggested by a careful history of possible contacts. The disease appears to spread from family to family, and the people themselves are usually able to point to a 'dirty' family currently supposed to be the source of infection. Other writers have stressed that the people usually know that this disease is non-venereally acquired, but that they use the same word for it as for venereal syphilis.[3] This was observed in this Coloured community, where, when the private parts were involved, it was unhesitatingly called 'vuilsiekte'.

4. The lesions themselves do not differ from venereally acquired syphilis, except that the primary chancre is not seen.

Condylomatous lesions of the anus or vulva were the most common finding in this outbreak, and because of their painless nature they were often overlooked by the mother. Condylomata at the corners of the mouth were sometimes seen. These may be confused either with the angular stomatitis of vitamin-B deficiency, or with a mild impetigo in that area.

A papular type of rash is relatively common, which may be local or general. This rash, in the writer's experience, was in all cases reported as 'chicken-pox' by teachers or welfare workers, but its nature becomes obvious when it persists for a few weeks.

The writer did not observe any lesions of the mucous membranes, teeth, or bones.

Clinical Findings. Over 20 cases of children apparently suffering from this form of syphilis were seen altogether, in the course of about 2 years. The eldest was a girl of 13, the youngest an infant in arms. Three cases presented as 'chicken-pox' rash, 2 with angular stomatitis, the rest with condylomata of the private parts. A large proportion of these cases were discovered either by the school teaching staff or by the voluntary social worker attached to the child welfare clinic. In the early stages of the outbreak a few were brought in by their mothers. It is highly probable that many cases were not seen owing to the sense of shame attached to this disease; later it was learned from 'informers' that many cases had been taken to private practitioners in the neighbourhood for treatment, but, since the outward signs of the disease were rapidly cleared by penicillin or arsenic, confirmation was not possible, especially as questioning on the matter was usually resented.

The writer's suspicions about the nature of this disease were aroused early on. Suspecting a case of congenital syphilis, and not wishing to take blood from the child, he obtained a specimen from the mother, a procedure rarely possible in this community. The report of the mother's blood came back Wassermann negative. Meanwhile the child's signs had cleared up after one injection of 400,000 units of penicillin in oil, and permission to take the child's blood, and to repeat the test on the mother, was refused.

Subsequently permission to take blood from the children affected was obtained in 4 cases, and from the mothers of 2 of these. In each child the blood was

Wassermann positive, and in the 2 mothers one was positive and one negative. Further questioning, however, revealed that the 'negative' mother had been treated by injections for a condition discovered during her first pregnancy 15 years previously (the affected child was the offspring of a later pregnancy). This mother cannot, therefore, be entirely ruled out as a possible source of her child's infection.

Epidemiological Findings. The sense of shame towards this complaint, and a general mistrust of the writer's intentions, made a full-scale epidemiological investigation impossible under the circumstances and in the time available for such work. An attempt was made, however, to assess the extent of syphilis among this population. Carefully prepared propaganda was employed in an attempt to induce the inhabitants to have their blood tested, in their own interest and in that of the children. Most persons, however, either made some excuse to avoid having this done, or else indignantly denied that they could possibly be infected. Eventually 21 adult bloods were collected. Of these 6 were reported Wassermann positive (28%). This sample was by no means a representative one, but in that it was composed of the better educated and more co-operative members of the community, its bias will have tended to give a result actually lower than the true state of affairs.

Environmental Findings. The location consists of 24 identical Municipally-built dwelling houses, each house comprising 3 small rooms each 10 feet square. In the garden of each is a brick-built bucket-latrine of outmoded pattern. Attached to each latrine is a store shed, also brick-built, size 5 x 3 feet. A house-to-house survey revealed that there were about 250 persons living in the 24 houses, an average of over 10 persons per house. When it is remembered that there were several 'respectable' families with no over-crowding, the overcrowding in the others can be imagined. In one house 17 people were living, for example. In more than one instance the small store rooms were being used as living rooms; in one a mother and 3 children were living in a space too small for her even to lie flat.

In most cases the latrines were in that state of dilapidation which is inevitable when several families share one in common under these circumstances. Seats were usually broken, and invariably fouled.

Social Circumstances. The standard of living of most of the inhabitants is extremely low. Poverty and underemployment is rife. Few of them have any skill, and have to sell their labour in competition with the local Bantu, who, with no rents to pay, and often their own land and cattle, are usually content to work for lower wages, pitifully small though these may be. The Coloured people have an additional degrading influence in their access to alcohol, which exerts its evil in the all-too-familiar ways—the impoverishment, the lowering of personal pride and standards of behaviour, the neglect of hygiene and housewifery, the lowering of resistance to disease, and the lowering of standards of morality and decency. In several families the breadwinner was usually in jail for drunkenness, leaving the mother to exist on a few shillings of social welfare benefit. To visit this location on a Saturday afternoon, to be greeted by drunken leers and cat-calls, to see comatose bodies lying half in and half out of their doorways, to see the screaming women, shouting abuse at all and sundry, their hair and clothing dirty and disarranged, to see the children cowering in hiding places or scattering with fright from a raised hand, to see such a sight is to witness depths of squalor and degredation of the order that must have inspired Hogarth to paint his *Gin Lane*, a picture of the slums of 17th century London.

Course of the Disease. External signs, and presumably the infectability, rapidly clear up with either arsenic or penicillin. In the circumstances described here any attempt at full-scale treatment or serological follow-up was impossible. If untreated the lesions may spontaneously clear up after a few months. The writer was informed of cases of 'cure' attributed to some home-made or chemist's-shop remedy, where presumably this had taken place. The local publicity given to this outbreak made the people aware of the possibility of speedy relief of symptoms following medical treatment, and many cases were treated by neighbouring practitioners this way without being seen by the writer, whose insistance on blood tests and his lectures on personal hygiene, made his methods unpopular. It is difficult to say whether this outbreak appeared in true *epidemic* form, or whether the increased pressure by social workers, an amateur school medical inspection, and an increased awareness of the nature of the affliction in the population, brought cases to light which normally were *endemic* in nature, formerly spontaneously disappearing and causing no great inconvenience. Occasional cases continue to be discovered from time to time.

SUMMARY AND DISCUSSION

It is popularly supposed that syphilis is acquired only congenitally or venereally. But where suitable conditions favourable to its spread are found, namely a high syphilis rate and low standards of living, it is possible for the disease to spread by contact among the age-group most vulnerable, the children. The disease is probably endemic, but improved medical supervision may make it appear as a sudden outbreak or epidemic. The signs of the disease are indistinguishable from congenital syphilis or from secondary venereal syphilis, its true nature being suspected only from the age-group attacked and the suggestion of contact-spread.

Such an outbreak in a small Coloured location is described, which, though small in numbers, presented the typical features of epidemic (endemic) syphilis as described elsewhere. It is by no means certain that all the cases seen were not congenital in origin, especially the infants, but, in any case, a dividing line between the two types of disease is not possible. The writer would suggest that careful surveys among the Coloured school children of the country will reveal that this disease is more common than was suspected.

Most of the children seen were cases of condylomata of the private parts; a 'chicken-pox' rash, and angular stomatitis, are less common findings. Serological confirmation was obtained from the few cases where a blood specimen was obtainable. A small sample of the adult population of the location revealed a serological syphilis

rate of at least 28 per cent. The environmental and social conditions in this location, both conducive to the spread of contagious disease, are described.

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THE AGRICULTURAL FOUNDATION OF NUTRITION

II. FOOD RESOURCES IN RELATION TO POPULATION

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> The ratio of food resources to the number of individuals determines the whole nature of a civilization'.
>
> *W. H. Forbes* [1]

Population 1904-51. Nowadays the ratio of 'food over population' (F/P) is demanding attention in many parts of the world. We shall consider our food resources in later articles.

From Table I we see that since the first census in 1904 the total population of the Union of South Africa has grown from 5.2 to 11.4 million. It has more than doubled within 42 years. The annual rate of increase has varied around about 2%. Almost a quarter of a million more persons each year are now needing food to keep them alive. *The autocatalytic* nature of this growth process is grasped better, perhaps, if we remember that in the last 3 census-intervals the population has been increasing at the rate of 20, 21 and 28 persons *per hour*.

Population 1951–2000. What do these figures suggest for the second half of the century? Though hazardous to make, since they depend mainly on such changes as may occur in the vital statistics of the non-European community, there are two estimates available which are worth pondering over. Sadie [2] expects a total population for the year 2000 of 28.3 million, of which 5.7 will be Europeans. Badenhorst's [3] estimates for various intervals are shown in the graph in Fig. 1; his total for the year 2000 is 30.4 million, of which 4.5 will be Europeans. Forty-six years may be a longish time to look ahead, but we are not likely to be far out if we accept his estimate of 14.6 for the total population in 1960 and 17.7 in 1970, i.e. 2 and 5 million respectively more than in 1951.

World Population. The mid-1951 estimate of the world's population was 2,434 million. The graph in Fig. 2 is adapted from a recent attempt to indicate how this has been growing since 1000 A.D. In recent years the rate of increase has been about 1.0% annually (the rate for Asia is not, as is usually supposed, so very different from that for U.S.A.) Medicine must share much of the responsibility for this phenomenal increase in the world's population since it is largely due to lowered mortality, expecially in infants. These facts concerning world population are not irrelevant to us, since they may well make the importation of food to meet our own needs less easy in the years to come, even if we can afford to pay for them.

Urbanization of Population. We also need to distinguish between the growth of our urban and rural populations. The changes that have been taking place are summarized in Table II:

TABLE II. URBANIZATION OF THE SOUTH AFRICAN POPULATION

Urban Population:	*European*	*Non-European*	*All Races*
1904	590,926	608,799	1,199,725
1951	1,972,735	2,958,374	4,931,109
Rural Population:			
1904	525,880	3,450,219	3,976,099
1951	670,452	7,044,814	7,715,266

In 1904 the European population was almost equally divided between town and country; by 1951 no less than 75% were urbanized, while the rural European population had remained almost stationary. This rapid and extensive change affects the food/population ratio in many ways. Thus by creating a large steady market it stimulates production and hence increases food resources; towns also improve the agricultural situation indirectly by providing an outlet for those who would formerly have been accommodated by an undesirable subdivision of land. On the other hand it is often the more enterprising who desert farming. There is also a divorce between the interests of producer and consumer. The urban dweller is almost entirely a non-producer of food, so that the number of Europeans and non-Europeans *entirely dependent on others for their daily food* has grown enormously. The corresponding increase in the number of persons fed per producing unit will be discussed later.

TABLE I. POPULATION OF SOUTH AFRICA 1904–51

Census	1904	1911	1921	1935	1946	1951
Europeans	1,116,806	1,278,242	1,519,488	2,003,857	2,372,690	2,643,187
All Races	5,175,824	5,973,394	6,928,580	9,589,898	11,418,349	12,646,375

Census Interval	*Increase in Population*	*Average increase per annum*	*Average annual rate % of increase per annum*	
			Europeans	*All Races*
1904–1911	797,570	113,938	1.93	2.07
1911–1921	955,186	95,519	1.78	1.49
1921–1936	2,661,318	177,421	1.86	2.19
1936–1946	1,828,451	182,845	1.70	1.76
1946–1951	1,228,026	245,606	2.18	2.06

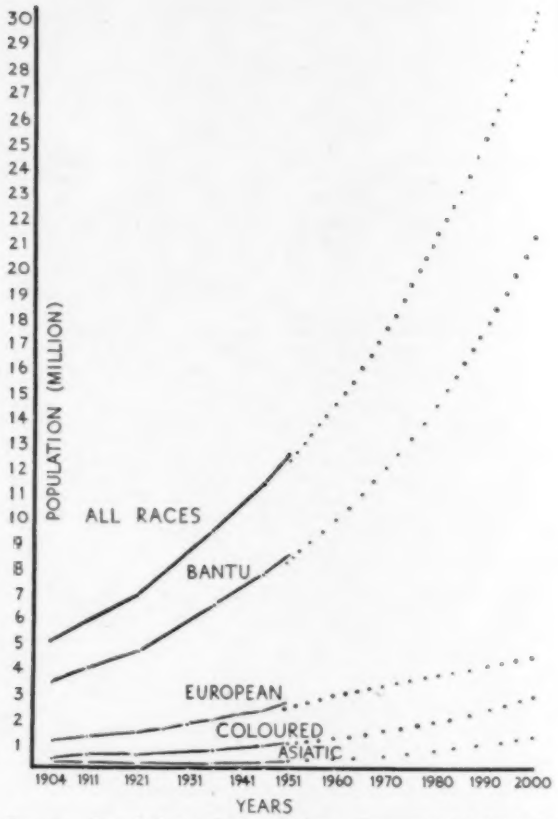

Fig. 1. Population of the Union. Enumerated 1904–1951; Estimated 1950–2000, (after Badenhorst [3]).

Feeding South Africa. In 1904 farmers met the needs of 1.1 million Europeans, about ½ million non-Europeans and some of the non-Europeans living on European farms; possibly 2 million all told. To-day that number must be nearer 8 million i.e. the total population of 13 million less 4 million Bantu living in the Reserves (who are mainly, though not entirely self-supporting), and also less many of the non-Europeans on European farms, who generally produce at least their basic food-requirements.

'*The National Food Ration*'. What would be available per head if we divided the total food produced in the country evenly over the total population? FAO has calculated this 'national ration' for many countries from data supplied by them. In spite of obvious limitations this provides one of the best ways available of comparing the nutritional situation in different regions of the world. A carefully elaborated technique is employed which allows for exports and imports, for ages and levels of activity; even the effects of climate are not overlooked. The figures thus obtained are published annually and readers may like to see how the South African 'ration' compares with one of the best-fed and one of the worst-fed countries (Table III). Owing to its more homeogenous population the New Zealand 'ration' doubtless resembles the diet actually eaten more closely than would be the case for South Africa or India. Always provided they are based on sufficiently accurate information, such calculations do at least serve as an approximate measure of the adequacy of the food produced to meet individual requirements; they also reveal differences in food resources and dietary patterns as between one country and another.

TABLE III. COMPARISON OF FOOD SUPPLIES AVAILABLE PER HEAD IN NEW ZEALAND, SOUTH AFRICA AND INDIA (1952) [4]

	NEW ZEALAND		SOUTH AFRICA		INDIA	
	1935–39	1948–49	1934–38	1946–49	1934–8	1949–50
(1) *Food Supplies Available per Head (at Retail Level) — Kg. per year.*						
Cereals (*a*)	87	90	156	153	143	119
Starchy roots	50	49	16	18	8	7
Pulses	3	3	2	4	22	20
Sugar	50	52	23	39	14	13
Fats (*b*)	17	15	3	4	3	3
Fruit	67	55	17	24	26	25
Vegetables	65	65	26	25	25	16
Meat	109	96	38	43	3	2
Eggs	13	13	2	2	0.4	0.1
Milk (*c*)	168	240	75	82	65	45
Fish	12	11	3	5	1	2
(*a*) In terms of flour and meal. (*b*) Including butter. (*c*) Excluding butter.						
(2) *Calorie and Protein Content of National Average Food Supplies (at Retail Level)* G. per head per day						
Calories	3260	3250	2300	2520	1970	1700
Total protein	96	96	68	73	56	44
Animal Protein	64	65	24	27	8	6
Pulse Protein	1	1	1	2	12	10
Estimated Calorie requirements: New Zealand 2670; South Africa 2400; India 2250.						

Conclusion: The real nutritional problem, for South Africa as for many other countries, is not so much whether we can increase the production of food; this we certainly can and must do; but whether, for a freely-reproducing population, food production *per person* can be made to reach and can then be maintained at the level required for good health.

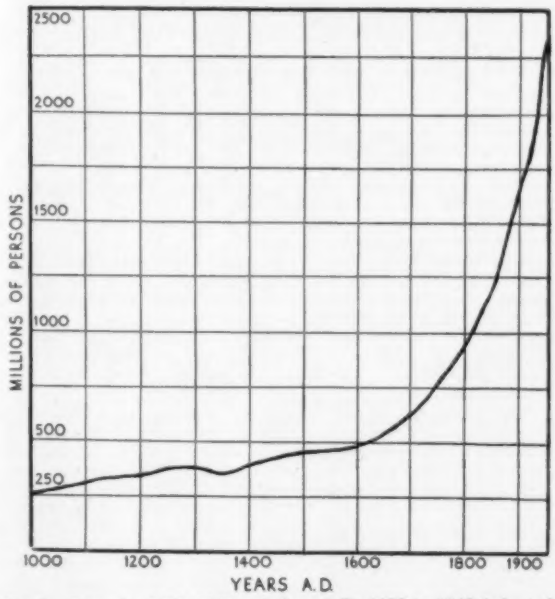

Fig. 2. Growth of World Population, A.D. 1000 to 1949 (adapted from Reynolds [5]).

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THE CONTINUING EDUCATION OF THE GENERAL PRACTITIONER

PRESIDENTIAL ADDRESS*, NORTHERN TRANSVAAL BRANCH

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In searching for a subject that might not only interest you, but contribute something towards solving the problems that vex us and add to the complexity of the practice of medicine, I found a host of matters controversial and needing attention. You have heard, read and said a lot about the declining status of the general practitioner, the over-production of doctors, the institution of State medical services, free hospitalization, and other matters vitally concerning our work, our service to the community and our livelihood.

The subject I have chosen for my address is the continuing education of the general practitioner. It is a need that has been agitating your minds for some time and which you have already made efforts to meet.

Let me bring to your attention some of the objects of the Association we belong to:

1. To promote the medical and allied sciences and to maintain the honour and interests of the medical profession.

2. To hold and arrange for the holding of periodical meetings of the members of its branches, and of the Association and of the medical profession generally.

3. To circulate such information by its Journal and other papers.

I propose to stress the educational value of the Medical Association, which lies in the activities of branches or divisions, groups or sub-groups, or the whole Association. For inspiration I have studied again one of William Osler's addresses delivered some 50 years ago; there is still much wisdom to be found in it, even though the years of research have increased medical knowledge tremendously.

There are many problems and difficulties in the education of the medical student. The most important aspect is the bedside instruction in clinical medicine, individually or at most in small groups; but there is no way of giving the student instruction in that most essential and difficult art—the handling of patients and relatives in their home environment; dealing with their prejudices, superstitions, convictions, loves and fears. This is best learnt from experienced general practitioners during actual practice as assistants to them—an exalted form of apprenticeship—or in the hard school of trial and error.

What about the continuous education of the general practitioner —an equally if not more difficult problem? Once the medical student has satisfied University and Medical Council that he has the minimum of professional knowledge required for degree and registration—and this there is control over—he is free to practice medicine. Who can be certain of the state of the general practitioner's knowledge in 5 or 10 years after graduation? There is no control over that.

The specialist is forced, if he is to continue as a specialist, to keep abreast of the times in his subject; but what of that essential man in the practice of medicine, the family doctor? He is in the front rank in the battle with death, disability, disorder of the mind, and those dreadful emergencies that bring darkness and despair into so many households. For him it is essential to realize that education is a life-long business. The difficulty of his continuing his education lies partly in the chances given him, and partly in his own individuality; his desire to learn, or his satisfaction with his knowledge and capabilities—a state of self-sufficiency inimical to any advance or improvement.

DIAGNOSIS A MATTER OF PROBABILITY

The science of medicine is accurate and definite, but the problems of disease are complicated and difficult because the conditions of any given case may be unlike those in any other; each case presents some individual variation. Variability is the law of life; no two persons are alike and no two individuals react alike and behave alike in the abnormal conditions we know as disease. Herein lies a fundamental principle of medicine and the education of the general practitioner—one he may never grasp—namely that 'probability is the guide of life'. Opinion, and not full knowledge, must often remain his stay and prop, even though he be uncomfortable in the use of 'perhaps' to preface so much connected with the practice of his art.

To illustrate, I mention a case with disseminated cystic disease of bone resembling in every way von Recklinghausen's hyperparathyroidism; yet the presence of a small primary carcinoma of the breast pointed to widespread secondary cancer instead of to a parathyroid tumour. Or the case with marked pulsation to the left of the sternum in the 2nd, 3rd and 4th interspaces, palpably expansile, with tracheal tug, flat percussion note, accentuated heart sounds, soft systolic murmur and small radial pulse on the left side, together with left recurrent laryngeal nerve palsy which made the diagnosis of aneurism of the arch of the aorta seem certain. Few indeed would have had a doubt or used the word 'perhaps'; yet there was a small nodule in the left lobe of the thyroid, secondary nodules in the cervical and mediastinal lymph glands, and increased intracranial pressure with papilloedema, which made the diagnosis that of malignancy.

MEDICINE NOT A BUSINESS

But I must come back to the subject of this address—the education of the practitioner. Some may have finished medical school without the capacity for self-education, with a misconception of the prolonged struggle necessary to keep the education that they have, let alone improving on it. The practice of medicine is not a business, and the education of the heart—that compassion for one's fellow man, sharing his *lief en leed* and allowing for his idiosyncrasies, which the doctor only acquires after qualification—must keep pace with the education of the head; the 'human heart by which we live' must control our professional relations.

Few occupations are more satisfying than medical practice, if a man is once orientated and has the philosophy of 'service'—that we are here not to get all we can out of life, but to see how much we can add to it—that we should serve gladly and for that service get a living—the opposite of the idea of so many that 'the State owes me a living'.

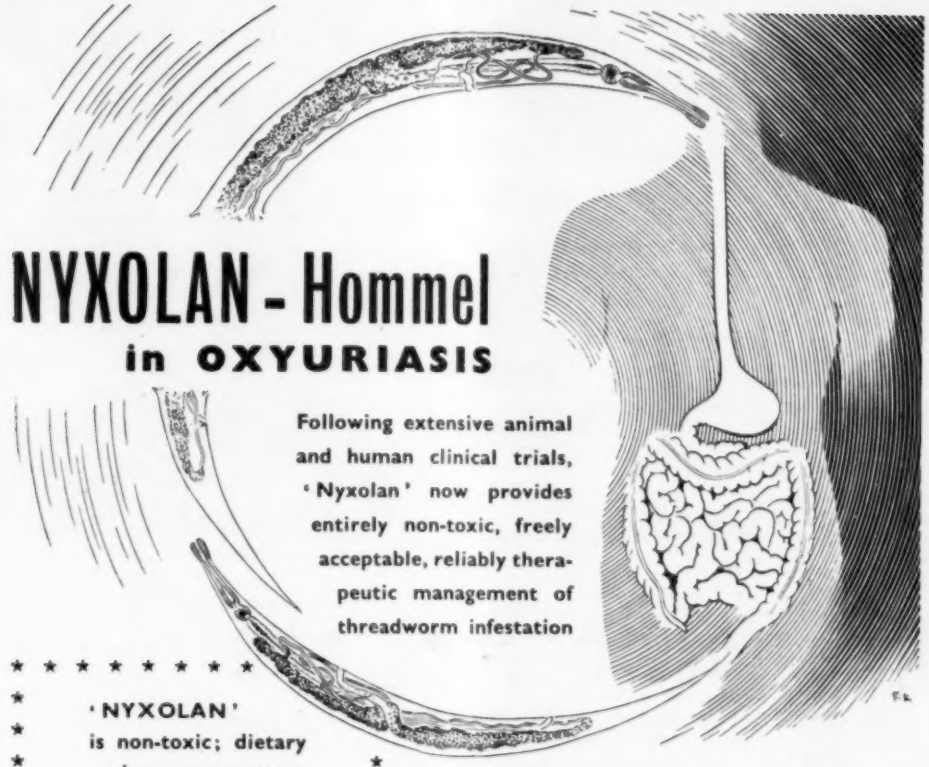
The public is rarely responsible for the failures in the medical profession; failure is almost always in the man himself, whether he stagnates, rarely if ever takes stock of himself to clear out the out-of-date goods on the shelves of his mind, or succumbs to the reductions of Venus, Bacchus or Mammon.

The killing vice of the young doctor is intellectual laziness. Too often he gets the habit of the newspaper or novel or bioscope while he is waiting for patients to come. Systematic reading of medical literature goes by the board, and 5 or 10 years later he will know less than the day he qualified and yet be convinced of his own excellence, thanks to Nature's healing power.

ASSOCIATION MEETINGS

It is especially here that the meetings of our Association should aid in his salvation—but he must attend and share in them. The general practitioner's post-graduate education comes from patients, journals and books; and from meetings with his confrères, supplemented every 5 or 6 years by a return to a post-graduate school for a refresher-course and to get rid of what is slovenly in thought and work. Every doctor should be a member of a medical society, not only for what he can get out of it, but for what he can contribute to it.

Concourse with our fellow practitioners will remove those petty jealousies, pinpricks and slights that cause so much strife and bickering in our ranks, in contrast to the ideal of medical practice which is unity and friendship and sharing of knowledge for the benefit of suffering mankind. No other profession has that



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Following extensive animal and human clinical trials, 'Nyxolan' now provides entirely non-toxic, freely acceptable, reliably therapeutic management of threadworm infestation

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CLINICAL OBSERVATIONS. Significant trials in medical institutions show that 'Nyxolan' is a most reliable anthelmintic when used alone, i.e. without supportive purgation, enemas or anal counter-irritants. Abstracts from literature describing clinical results are available on request.

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FORM AND POSOLOGY. 'Nyxolan' is presented in liquid form, the active ingredient being incorporated in a syrup which ensures ready acceptance by children.

Daily dosage of 'Nyxolan' is:—Children under 6 years, 1 dessertspoonful thrice daily; Children over 6 years, 1 tablespoonful four times daily; Adults, 2 tablespoonfuls thrice daily.

PRESENTATION. Bottles of 8 fluid oz. net.

★ *'Nyxolan' is widely used in other countries under the name 'Aloxyn' Not publicly advertised.*

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Contains specially prepared, de-fatted milk powder — gives the Non-European infant an equal chance of health from the beginning.

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Feeding tables are available in all Native dialects. For a supply of these write, Dept., Free Advice Bureau, Hind Bros. & Co. Ltd., Umbilo, Natal.

traditional generosity—there are no secret remedies or practices in medicine—by word of mouth or through journals we tell each other. But you cannot tell a person who is not there to listen or does not take up his journal to read.

In reviewing the fare that was provided during the year by our hard-working programme committee I find much that is excellent for post-graduate teaching—authoritative, stimulating, maybe at times controversial—the essence of what is needed to keep the mind active. One meeting I must single out for mention. Seven members contributed—3 specialists, 3 general practitioners and 1 post-graduate student. The discussion was lively and many took part that evening, which was well attended.

Yet other meetings were very poorly attended even though the subjects were the very matters that concern the general practitioner every day. Again I mention one where fare was provided by the orthopaedic surgeons on 'common orthopaedic disabilities in childhood'. Only a small handful of general practitioners attended —the rest were all specialists—E.N.T., psychiatrists, anaesthetists and paediatricians. The attendance at Onderstepoort was a disgrace, an insult to our hosts.

We should attend these meetings in such numbers that the board room cannot contain us. They are held so that we can state our problems, tell our experiences, relate what we have learnt. The more we learn, the greater our doubt becomes, yet the more capable we are of stating the probable diagnosis and the less we shall have to depend on Dame Nature's kindly aid.

The presentation of cases can be made less tedious by stating the salient features, instead of long screeds of history and examination and day-by-day record of the progress and evolvement of the illness.

I have always felt that 'clinical evenings' should be number one on our programme; but not only to show rare diseases—the most commonplace, owing to the variability I have mentioned, show differences that mislead.

LIBRARIES

The second necessity is to have a library. University and Association should combine to give practitioners as well as medical students the help a good library can give. A reading room, with the best in weekly journals on the tables, with shelves stocked with new books in the different categories, should be our common meeting place. We should all make sacrifices to establish and maintain such a library; everyone that does so will use it, and will promote harmony and contribute to the dignity and usefulness of our profession.

It is suicidal to isolate oneself from the general body of medical men; such isolation soon leads to a dangerous state of self-sufficiency and intellectual stagnation. He who is given over wholly to commercialism may feel it a waste of time and money to come to meetings or even to join the Association. His aim is to get what he can out of his patients, forgetting his obligation to put himself in the best possible position to serve them. Yet there are many who started right but as their practices increased found no time for these things. The '40-visits-a-day' doctor is really to be pitied, for he, perhaps more than any, needs the refreshment of mind that the exchanges of ideas and experience to be had in a medical society and a library can give him.

Yet the busier the doctor the more he is to be admired, if in spite of the demands of his practice he can still find time and energy, not only to share in the activities of the Branch, but also to do the work of the Association.

It is not only the meetings of divisions and branches that can encourage and elevate the practitioner, but also attendance at group meetings and Congress; and every practitioner should strive to take an active part in them.

The strength of a chain lies in its weakest link. We are links in the chain of our profession, and it lies with each and everyone of us to strengthen our capacity and improve the quality of our service.

ASSOCIATION NEWS : VERENIGINGSNUUS

ANNUAL MEETING OF THE CAPE MIDLAND BRANCH

The Annual Meeting of the Cape Midland Branch was held in Port Elizabeth on 21 January 1954. Dr. B. T. Hooper was in the Chair, and 33 members attended.

Dr. D. L. Ferguson M.O.H., Port Elizabeth, reported on the present poliomyelitis position, as a matter of urgency. A discussion took place and approval was unanimously given to Dr. Ferguson in the course of action that he was taking.

The Treasurer's statement having been adopted, the Secretary read his annual report, in which he intimated that during the year 2 film evenings were held and 9 clinical meetings, at which a wide variety of unusual and instructive cases were shown. Visiting lecturers at the clinical meetings were Dr. I. Simpson Hall, of the Edinburgh Royal Infirmary, Dr. D. Ordman, of the South African Institute for Medical Research, Johannesburg, and Professor Adler, of the Hebrew University.

Five general meetings of the Branch were held and it was noted with satisfaction that Dr. Sichel had been present at one of them.

Dr. Wm. Pickles, the first President of the College of General Practitioners, and a Gold Medallist of the Royal College of Physicians, was also entertained by the Branch.

Branch Council held 10 meetings during the year and a good deal of this time was spent on Contract Practice. It was ensured that all new Medical Aid and Benefit Societies pay the minimum standard fees, but it was a matter for regret that many mushroom Benefit Societies existed which pay so poor a remuneration that we should be ashamed to accept it. The difficulty was also mentioned in getting all doctors to fall in line in refusing to fill in forms for unapproved Medical Aid Societies.

The Branch was also instrumental in forming an Emergency Telephone Service which was long overdue in a city of the size of Port Elizabeth.

Mention was made of the excellent progress that had been made in the arrangements for Medical Congress, which was being held here at the end of June.

The result of the election was announced as follows:

Mr. E. Colley, President Elect, becomes President. Mr. H. I. Maister, President Elect. Dr. J. Hanekom, Vice-President, Dr. W. Mirkin, Treasurer. Dr. P. Jabkovitz, Secretary.

Branch Council: Drs. J. Rabie, H. Borkum, J. Tarlie, M. A. Robertson, and P. D. Beck; with Drs. B. T. Hooper and A. P. Albert, ex-officio.

Dr. Hooper then inducted Mr. E. Colley. The new President of the Branch, thanked the outgoing President for his services during the year. Dr. B. T. Hooper thanked the Secretary for his assistance and then delivered his presidential address.

His theme was the handling of the problems in life which make for longevity. He touched on the question of obituary notices and biographical reports in the *Medical Journal*, which would cause us embarrassment if we were there to read them.

His advice on health management for the doctor was the 1607 Latin text, 'Use three Physicians still—first Dr. Quiet, next Dr. Merryman and then Dr. Diet', indicating how centuries had not altered the advice or made it less wise. He advocated the philosophical and optimistic outlook on life, cultivating good habits of sleep, even in the lunch-hour rest period.

He quoted one worrier who took the trouble to analyse his worries, with this result: 30% of worries were over past decisions which could not be altered; 12% were over others' criticism, most of it untrue; 10% concerned health; 40% were about future events which never occurred; 8% were legitimate, and most of these could easily be met as they arose.

He discussed relaxing avocations and sport. His reaction to the stories of friends or patients who died on the golf course was that they would have probably died ten years earlier if they had not played the game.

He discussed the necessity for the care of one's diet and gave a *resume* on modern thought about smoking and drinking.

He concluded with the adage, 'If you use your youth and middle age well you can postpone your obituary and have fun while you do it'.

WORLD HEALTH DAY ANNIVERSARY

It was on 7 April 1948 that the Constitution of the World Health Organization officially came into force. The anniversary of this historic date is now observed each year as World Health Day, and the occasion is available to national and local health authorities throughout the world as an added opportunity to arouse popular interest in health needs and to stimulate the people's co-operation in health action.

The celebration of the Florence Nightingale Centenary in 1954 has inspired the choice of the theme *The Nurse, Pioneer of Health* for this year's World Health Day. It will serve to underline the significance for the health of the modern world of nursing in all its manifold forms.

WHO has issued a number of articles on this subject by distinguished authors, including an extract from Florence Nightingale's *Notes on Nursing*. These are available for organizations co-operating in the celebration of World Health Day.

PASSING EVENTS : IN DIE VERBYGAAN

Dr. Patricia Massey, of Cape Town, has been elected a Fellow of the College of Obstetricians and Gynaecologists.

Darling Foundation Prize

WHO has awarded the Darling Foundation Prize to Dr. G. Robert Coatney, of the National Institute of Health, Bethesda, Md., U.S.A., and to Prof. George Macdonald, Director, Ross Institute of Tropical Hygiene, London, for their outstanding contribution to the fight against malaria. The presentation will be made by the Seventh World Health Assembly.

The prize consists of a bronze medal and a sum of 1,000 Swiss francs, and was founded in memory of Dr. S. T. Darling, accidentally killed during a study mission of the Malaria Commission of the League of Nations in 1925. The last award was made in 1951, for the first time in 13 years, to two British scientists, Prof. H. E. Shortt and Dr. P. C. C. Garnham.

Regional Director for Africa

Dr. Francisco José Cambournac, formerly Director of the Malaria Institute of Lisbon, has been appointed as Regional Director for Africa in succession to Dr. F. Daubenton. His headquarters are at Brazzaville.

The Eight World Health Assembly will be held in Mexico City in 1955.

Eli Lilly Medical Research Fellowship (South Africa)

Established by the Cape Town Post-Graduate Medical Association.

1. Applications are invited from suitably qualified medical practitioners for the Eli Lilly Medical Research Fellowship (South Africa).
2. The Fellowship is for the purpose of medical research and is not intended for post-graduate clinical study. It is available for one year.
3. The value of the Fellowship is 3,000 United States dollars for one year, and in addition travelling expenses will be allowed, based on a travel budget to be submitted by the Fellow. This will cover the cost of travel and incidental expenses from the place of residence of the Fellow to the approved place of study in the United States of America, as well as the return journey.
4. Other things being equal, preference will be given to candidates under 40 years of age.
5. Any medical practitioner *registered* in South Africa will be eligible for this award.
6. There will be no discrimination for the award on grounds of race, colour, creed or sex.
7. The candidate must submit evidence of his capacity to do original research work.
8. The candidate must submit a programme of the proposed research. He is advised to submit an alternative scheme in case there are difficulties about carrying out the first one.
9. It is advisable for the candidate to indicate at what institution he proposes to undertake the research and he should also state whether he is in a position to make any arrangements to carry out the research at the proposed institution.
10. The successful candidate must undertake to return to South Africa for a period of at least two years after the termination of the award.
11. Applications should be forwarded to reach Dr. H. A. Shapiro, Honorary Chairman, Selection Committee, Eli Lilly Medical Research Fellowship (South Africa), P.O. Box 2980, Cape Town, not later than 15 June 1954. They should be accompanied by the names of not more than two suitable referees.

Third International Congress of Internal Medicine

This Congress, organized by the International Society of Internal Medicine, will be held in Stockholm, Sweden, on 15–18 September 1954. Congress Headquarters will be at the Concert Hall, Stockholm.

According to the preliminary programme (subject to alteration) there will be symposia on Hypertension, its Pathogenesis and Treatment, and on Mesenchymal (Collagen) Diseases, their Common Characteristics and their Nature. Communications on other subjects will be received. There will be simultaneous interpretation in 3 or 4 languages. Only members of the International Society will be allowed to speak in the discussions.

There will be a reception by the President, a banquet in the City Hall, a performance at the Royal Opera House, and other social events, as well as visits to institutions and hospitals. An exhibition of apparatus, pharmaceutical products, etc. will be held. Post-Congress tours in Sweden (1–6 days) will be organized.

Membership of the Congress can be obtained by application only, which must be made to the Secretariat of the Congress, Karolinska sjukhuset, Stockholm, 60. Family members may on application be given associate membership. The Congress fee is Swed. Kr. 60 for members and Swed. Kr. 40 for associate members.

Travelling arrangements are in the hands of the American Express Co. (Birger Jarlsgatan 15, Stockholm).

Medical Advisory Bureau

Members are reminded that the British Medical Association has established a Medical Advisory Bureau for the purpose of assisting overseas visitors to obtain posts and to make the most of their opportunities for post-graduate study. Before proceeding overseas, members should write to the Medical Director, Dr. H. A. Sandiford, at B.M.A. House, Tavistock Square, London, W.C.1., who is very willing to be of assistance to them.

NEW PREPARATIONS AND APPLIANCES : NUWE PREPARATE EN TOESTELLE

'*Redilev*' *Soluble Polyvitamin Tablets* (Sharp and Dohme, P.O. Box 5933, Johannesburg) are dried, soluble tablets packed with a dehydrating agent to ensure freedom from moisture and thereby retaining stability and potency. Each tablet contains: Vitamin B-12 5 mcg. Ascorbic Acid 50 mg. Thiamine 3 mg. Riboflavin 1.5 mg. Pyridoxine 3 mg. Niacinamide 15 mg. Vitamin A 3000 units. Vitamin D 1000 units.

The tablets are soluble and tasteless and may be added to infant feeds, water, fruit juices, cereals and other semi-solid foods etc. To avoid vitamin destruction through cooking, they should be added after cooking and sterilization. They are easy to administer in exact dosage, are convenient for paediatric use, and may also be used for adults as the tablet is easy to swallow with a glass of water.

Dosage: For infants and small children, one tablet every other

day or daily; for adolescents and adults, one tablet daily. The dosage should be increased according to clinical judgment.

'Redilev' Soluble Polyvitamin Tablets are packed in bottles of 30 tablets.

'*Tyrotrace*' *Ointment:* Recent studies have shown that a high antibacterial activity, particularly against gram-positive organisms, may be obtained by combining *bacitracin* (obtained from B. subtilis) and *tyrothricin* (from B. brevis). Their combined activity is marked by a strong synergistic effect.

'Tyrotrace' Ointment (Sharp and Dohme, P.O. Box 5933, Johannesburg) combines these two antibiotics and has a wide antibacterial range of activity. It is non-toxic and is active in the presence of pus, blood and necrotic tissue. It is well tolerated and no cases of sensitization have been reported to date.

The new ointment is indicated in the treatment of infected wounds, ulcers, impetigo, secondarily infected exzemas, ecthyma and folliculitis barbae. It is particularly effective in the topical treatment of pyogenic dermatoses.

'Tyrotrace' is supplied in ½-ounce collapsible tubes. It should be applied liberally to the infected area daily after cleansing and debridement.

'*Tyotocin*' *Ear Drops* (Sharp and Dohme, P.O. Box 5933, Johannesburg) are an antibiotic, fungicidal analgesic for the treatment of ear infections and the control of pain. They combine the antibiotic properties of tyrothricin and the germicidal effect of hexylresorcinol with the local anaesthetic properties of benzocaine and antipyrine.

Formula: Tyrothricin 0.05%. Benzocaine 1.25%. Antipyrine 5.0%. Hexylresorcinol 0.1%. Propylene glycol anhydrous 50.0%. Alcohol 0.5%. Glycerin anhydrous q.s.

Because of the anhydrous propylene glycol and glycerin, the preparation withdraws fluid from the surrounding inflamed tissues of the aural canal and relieves much of the pain caused by congestion.

It is indicated in the treatment of bacterial and mycotic infections of the ear, such as furunculosis, otitis externa, otitis media, myringitis and impacted cerumen.

The aural canal should be thoroughly cleansed with alcohol and sponged dry. The drops may then be instilled directly into the aural canal with a dropper, or the aural canal may be packed with a gauze wick kept saturated with 'Tyotocin' and removed 12 to 24 hours later. Treatment may be repeated as often as necessary, and, in mycotic infections, should be continued for a period after the canal is entirely free from exudate and debris.

'*Tyotocin*' is supplied in 15cc. bottles with dropper.

'*Sanescol*' (H. R. Napp, Limited, London) is a powder which contains in the adult dose of 2 teaspoonfuls approximately : Dry extract of belladonna ¼ gr., kaolin 2 g., aneurine hydrochloride 2 mg., riboflavine 1 mg., nicotinamide 5 mg., ascorbic acid 5 mg.

It is introduced for the conservative treatment of colonic infection (particularly mucous and ulcerative colitis), of peptic ulcer, and of acute diarrhoea.

The kaolin acts as an absorbent of intestinal toxins, the belladonna reduces mucous secretion and allays excessive peristalsis and spasm, and the vitaminic content has adjuvant nutritive functions besides promoting tissue repair particularly in ulcerous conditions.

OFFICIAL ANNOUNCEMENT : AMPTELIKE AANKONDIGING

Members are reminded that they may forfeit their membership if they accept a post not approved by the Association.

The Association does not approve of the further appointment of full-time medical officers to the Vanderbijlpark Medical Benefit Fund.

By order of the Chairman of Council,

A. H. Tonkin
Secretary

Medical House
Cape Town.
18 February 1954.

Lede word daaraan herinner dat indien hulle 'n betrekking aanvaar wat nie deur die Vereniging goedgekeur is nie, hulle hul lidmaatskap kan verbeur.

Die Vereniging keur nie verdere aanstellings as voltydse geneeskundige amptenare van die Vanderbijlpark Mediese Bystandfonds goed nie.

Op las van die Voorsitter van die Raad,

A. H. Tonkin
Sekretaris

Mediese Huis
Kaapstad
18 Februarie 1954

BOOK REVIEWS : BOEKRESENSIES

DIURETIC THERAPY

Diuretic Therapy. By Alfred Vogl, M.D. (Pp. 248 + xiii. 38s. 6d.) London: Bailliere, Tindall & Cox. 1953.

Contents: I. Edema: Classification, Pathogenesis and Principles of Treatment. II. Indications for Diuretic Treatment. 1. Congestive Heart Failure. 2. Hepatic Cirrhosis with Ascites. 3. Nephrotic Edema. 4. Nephritic Edema. 5. Diabetic Intercapillary Glomerulosclerosis. 6. Beriberi Heart Disease. 7. Obesity with Salt and Water Retention. 8. Premenstrual Edema. 9. Chronic Post-phlebitic Edema. III. Pharmacology of the Diuretic Drugs (Their Action and Relative Effectiveness). 1. The Osmotic Diuretics. 2. Acidifying Diuretics. 3. The Xanthine Diuretics. Uracil Compounds. 4. Decholin. 5. Organic Mercurial Compounds. 6. Bismuth Salts. IV. Antidiuretic Agents. 1. Sodium Compounds. 2. Narcotics. 3. Barbiturates, Antipyretics, Nicotine. V. The Practice of Diuretic Therapy. 1. The Role of Rest in Diuresis. 2. The Low-Salt Diet. 3. The Cation-Exchange Resins in the Management of Edema. 4. The Mechanical Removal of Transudates and Edema Fluid. VI. The Practice of Diuretic Therapy (Contd.). 5. The Organic Mercurial Diuretics. 6. The Acidifying Salts. 7. The Xanthine Diuretics. 8. The Management of Refractory Edema. Closing Remarks. Bibliography. Index.

Diuretic therapy is an established routine practice. This monograph by Dr. Vogl, who first described the diuretic effect of the organic mercurials, is timely and authoratitive.

The book deals mainly with cardiac failure, the commonest cause of oedema. Hepatic, renal and nutritional oedema receive less attention and in any case the response to diuretics in these conditions is less satisfactory. The importance of sodium chloride is emphasized. Oedema is essentially due to the retention of salt and water. It can be prevented by restricting the intake of salt or interfering with its absorption. The author emphasizes that salt restriction has been in use for almost a hundred years, though it has recently been revived with extensive publicity. Low sodium diets are included and reviewed. The absorption of salt can be interfered with by means of cation exchange resins.

The most effective way of treating oedema, however, is by poisoning the kidneys and preventing the absorption of chloride and sodium. The organic mercurials produce this effect transiently and reversibly. They are far and away the most effective diuretic agents available. The monograph thus essentially concerns the pharmocology, mode of action, method of administration and toxic effects of the organic mercurials. Next in importance are the xanthrine derivatives and almost certainly these drugs are not used as extensively as their efficacy warrants, chiefly because intravenous medication is necessary. Urea, salts and less well-known agents do not have much part to play except as auxiliary agents.

Nowadays conditions produced by therapy (iatrogenic) are encountered. This is well exemplified by the low salt syndrome produced by excessive diuresis in a salt-depleted subject. A clear account is given of the low-salt syndrome, hypochloraemic alkalosis and hypokalaemia.

The book suffers in one respect being unnecessarily long and repetitious, particularly as the subject is restricted. However it contains a wealth of information, is up to date and has an extensive bibliography. It is easy to read. The student and practitioner will find much of interest and value.

V.S.

CRITICISM IN THE JOURNAL

An article published in the *Journal* on 29 August 1953 headed 'Modern Trends in Pharmacology and Therapeutics in Relation to Nutrition' by Prof. Douw G. Steyn and certain comments on it by Dr. H. A. Shapiro are the subjects of the correspondence published below.

On 13 October 1953 Dr. Shapiro wrote:

GIBBLE-GABBLE IN OUR JOURNAL

To the Editor: Careful consideration has convinced me that the article published in your issue of 29 August 1953 by Douw G. Steyn, B.Sc., Dr. Med. Vet., D. V. Sc., should not pass without comment. This article purports to deal with modern advances in treatment.

The mere fact that the author occupies a Chair of Pharmacology and is doubtless a very eminent veterinarian, does not excuse the uncritical speculation and assertion, as well as personal protestation and generalization found in his writing on this occasion. Such writing, from the point of view of a medical practitioner, may well be described (albeit somewhat onomatopoeically) as 'gibble-gabble'.

Clinical readers will continue to be mystified by the publication of such papers in our *Journal*.

H. A. Shapiro

On 31 December 1953 Dr. T. Shadick Higgins, the Editor of the Journal, sent the following reply:

Dear Dr. Shapiro: I have your letters of 1 and 29 December 1953, and I am very sorry that through delay on my part you have had to write twice. I am to blame for this, but please accept my assurance that I had no intention of being discourteous.

I decided not to publish your letter to the Journal. The reason was not that it implied a stricture on the editor for publishing the article you criticized. As far as that went I should have been quite willing to publish the letter. The reason in fact was that I did not think it would be fair to the writer of the article in question to publish a criticism in the terms you used.

I apologise for the appearance of discourtesy, and I wish you the compliments of the Season. Yours sincerely,

T. Shadick Higgins
Editor.

On 2 February 1954 Dr. Shapiro wrote:

SUPPRESSION OF CRITICISM OF PAPERS IN OUR JOURNAL

To the Editor: On 13 October 1953 I forwarded to you a letter criticizing an article by a non-medical contributor purporting to deal with modern advances in treatment, and published in the issue of 29 August 1953. The article was entitled 'Modern Trends in Pharmacology and Therapeutics in Relation to Nutrition' by Douw G. Steyn. My letter of criticism was necessarily in general terms because it was not feasible to deal with the author's numerous misconceptions and unwarranted claims *seriatim*.

I received no further communication from you after your routine acknowledgment of the receipt of my letter dated 19 October 1953. I therefore sent you a further reminder dated 1 December 1953. This also failed to evoke any response from you.

As I was unimpressed by your cunctatorial attitude, I sent you a further reminder on 29 December 1953. As a result you informed me (over 2¼ months after I had first written to you) that you had decided not to publish my letter of criticism, not because it implied a stricture on the Editor, but because you did not think it would be fair to publish the criticism in the terms I had used.

It is an elementary principle of publication in the medical and scientific press that any author must expect criticism if the claims he makes are controversial and I am sure that the non-medical contributor concerned would be the first to deplore the stifling action you have taken.

Your action is derogatory of the tradition of our Journal, which has kept its columns open even for the most trenchant criticism, whether of medico-political or clinical matters.

I wish, therefore, to record my protest and deplore your action most deeply as it is completely foreign to the traditional freedom of our medical press and offends the tenets of seemly practice.

H. A. Shapiro
B.A., Ph.D., M.B., Ch.B., F.R.S.S.Af.

The Editor sent copies of this correspondence to Professor Steyn, who wrote the following letter on 9 February 1954 and asked that it should also be published with the other letters:

GIBBLE-GABBLE IN OUR JOURNAL—Dr. H. A. SHAPIRO

To the Editor: Thank you for your letter of the 4th instant and copies of correspondence which passed between you and Dr. Shapiro in connection with my article 'Modern Trends in Pharmacology and Therapeutics in Relation to Nutrition' which appeared in the S. Afr. Med. J. of 29 August 1953.

Since my earliest days in scientific research I realized that there was one way, and one way only, in which I could establish whether (1) my experiments were correctly planned and executed, (2) my interpretations of the results and conclusions were justifiable and correct, and (3) my interpretations of, and conclusions drawn from, the relevant literature were reasonable and sound. To this end I have selected, in many countries of the world, authorities on biochemistry, chemistry, physiology, pharmacology, nutrition, medical science, and toxicology, to whom I send reprints of all my articles with the specific request for their criticisms. I have always appreciated unbiassed and unpersonal criticism of my work and publications based on the results of sound scientific research. Needless to say, by such criticism I have greatly benefited.

With regard to Dr. Shapiro's letter dated 13 October 1953, I do feel that it is a most unscientific way of criticizing any publication. I would welcome any constructive criticism from Dr. Shapiro in connection with my 'uncritical speculation and assertion, as well as personal protestation and generalization'. I would appreciate it very much if he would state facts about, and quote examples of, my 'gibble-gabble', and support his views and criticisms by quoting authorities. I wouldn't mind if he hits me hard as long as he bases his views on sound scientific evidence.

Douw G. Steyn.

CORRESPONDENCE : BRIEWERUBRIEK

A MOSQUITO REPELLANT

To the Editor: Colleagues may be interested in a simple effective home measure to prevent mosquito bites.

Melt down 2 ordinary household candles, ¼ block of camphor and 3 tablespoons of paraffin (lamp-oil). This forms a paste which is applied to the skin before going to bed. (To avoid danger from fire the melted wax and camphor should be removed from the stove before the paraffin is added).

In this area the mosquito is quite a pest and seems to show a predilection for infants. I have found the above paste more effective than the usual citronella oil, etc.

L. R. Lichtenstein.

103 Hartebeestfontein
P.O. Koekemoer
Transvaal
1 February 1954

The Medical Association of South Africa
Die Mediese Vereniging van Suid-Afrika

AGENCY DEPARTMENT : AGENTSKAP-AFDELING

KAAPSTAD : CAPE TOWN

Posbus 643, Telefoon 2-6177 : P.O. Box 643, Telephone 2-6177

PRAKTYKE TE KOOP : PRACTICES FOR SALE

(1437) Prescribing practice in Transkei 90% native and therefore cash. Gross takings over £2,000 p.a. including contract of approximately £150 p.a. Little night or week-end work, definite scope for expansion. No surgery and little maternity done. Easy travelling distance from sea. Surgery for hire at £5 p.m. Owner going overseas and therefore prepared to sacrifice at £600 for quick sale.

(1457) Goed gevestigde Westelike Provinsie praktyk. NETTO INKOMSTE oorskry £3,000 per jaar. Huis beskikbaar. Verband kan gereël word. Volle besonderhede op aanvraag.

(1484) WESTERN PROVINCE. Excellent opportunity to acquire practice in hospital town. Details on application.

(1530) Karoodorp. Eenmanspraktyk sonder opposisie. Gemiddelde inkomste £2,000 p.j. Premie verlang £700. Huis te huur teen £8 p.m. D.S. aanstelling.

(1606) Near CAPE TOWN. Excellent nucleus with cash takings already £1,409 p.a. 2 Small appointments. Rental surgery £10 p.m. Premium for goodwill £750. Terms available. Definite scope for expansion.

ROOMS TO LET

(1422) Cape Town. Waiting room and examination room available on long lease in St. George's Street building. (Quote also 1579).

FOR SALE

(1508) (*a*) One Cambridge Portable Electrocardiograph in excellent condition; (*b*) One portable pneumothorax refill apparatus, bottle type.

ASSISTENTE/PLAASVERVANGERS VERLANG ASSISTANTS/LOCUMS REQUIRED

(1554) S.W.A. Assistant urgently required with view to partnership. Salary £80 per month plus all found. Scope for surgery.

(1553) Transkei. Assistant as soon as possible for 6 or 12 months. Salary £80 p.m. Car not essential.

(1427) Natal. Assistant as soon as possible. Salary etc. to be arranged.

(1559) Bechuanaland. Locum tenens for 6 or 9 months or even longer. Salary £3 3s. 0d. per day, free board and lodging.

(1564) Cape Town suburban practice. Locum/Assistant required. Salary to be arranged also period of service.

(1576) East Griqualand partnership practice. Locum/Assistant for May, June and July. Salary offered £75 per month plus all found and an extra £5 a week during the time he acts as locum tenens. Car could be provided, but if own car is used, petrol and oil allowance will be made. 90% Native practice with D.S. appointment.

(1577) Transkei. Assistant/Locum as soon as possible. Salary offered £100 per month. Transport will be provided for.

(1603) Western Province long term assistantship from ± end of March for 6 months or more.

(1598) Cape Town Suburb. Locum for 2½ months from ± April 25. Salary £3.3.0. p.d. Car not essential.

* * *

DURBAN

112 Medical Centre, Field Street. Telephone 2-4049

PRAKTYKE TE KOOP : PRACTICES FOR SALE

(PD23) Natal. Prescribing practice particularly suitable for a woman doctor interested in obstetrics and gynaecology. Total gross receipts for 1950, £1,570; 1951, £1,595; 1952 (6 months), £1,340; 1953 (3 months), £382. Premium £1,250, includes furniture, fittings, instruments, drugs and existing book debts.

(PD24) Natal South Coast. Practice suitable for doctor who does not want full-time work. £250 for drugs, dressings, instruments, etc. No charge for goodwill. Small house on ½ morgen, £1,600. Immediate occupation.

LOCUMS REQUIRED

(72) Durban. Locum required for January and February with view to assistantship. General practice. Salary to be discussed with the Principal.

(73) Near Durban. Locum for January and February. £2 12s. 6d. per day, all found. Must have own car.

(74) Zululand. Locum for February. £2 12s. 6d. per day. all found. Own car necessary.

(75) Durban. 1 January. Locum view to assistantship/partnership. General practice. Salary to be discussed.

* * *

JOHANNESBURG

Medical House, 5 Esselen Street, Telephone 44-9134-5, 44-0817
Mediese Huis, Esselenstraat 5, Telefone 44-9134-5, 44-0817

PRACTICES FOR SALE : PRAKTYKE TE KOOP

(Pr/S85) Transvaal hospital town. Very progressive area. Well-established practice with two transferable appointments. Annual income over £3,500. Premium required is £2,500 and terms will be discussed.

(Pr/S90) Uitstekende praktyk op hospitaaldorp in Transvaal. Jaarlikse inkomste oorskry £5,000. Twee oordraagbare aanstellings. Premie van £2,500 sluit meubels en instrumente in. Hierdie praktyk kan nog uitbrei en kan tans twee geneeshere dra. Terme kan gereël word.

(Pr/S92) Double practice near Johannesburg. Old-established Non-European cash practice and a rapidly expanding European practice. Now offered at a REDUCED PREMIUM of £1,750 and terms could be arranged.

(Pr/S93) Noord-Transvaal. Uiters lonende praktyk met D.G.-aanstelling. Geen opposisie. Gerieflike woning en spreekkamers op 10 morg grond. Premie van £4,000 sluit in eiendom, meubels, instrumente, voorraad medisyne, 'n paraffienkoelkas en 'n 1947 Studebaker sedan. Billike terme sal gereël word. Baie geleentheid vir uitbreiding.

(Pr/S96) Ongeopponeerde Vrystaatse praktyk. D.G.-aanstelling. Inkomste vir 1953 was £2,900 en die praktyk brei nog steeds uit. Premie van £450 kan afbetaal word.

(Pr/S105) Johannesburg. Non-European practice, with no night work and no week-end work. Expanding rapidly. Premium £700 and includes, furniture, drugs and fittings.

(Pr./S100) Hospital town in Northern Rhodesia. Well-established high class practice. Gross bookings average £500 p.m. and actual receipts average £360 p.m. Expenses amount to about £60 p.m. Will suit doctor interested in surgery and gynaecology. Premium required is £1,000. Equipment approximately £200. Terms could be arranged. BUYER COULD START IMMEDIATELY AS LOCUM. Long introduction will be given.

(Pr./S101) Oos-Transvaal. 'n Jong praktyk wat vinnig groei, in 'n vooruitstrewende omgewing. Jaarlikse inkomste van ongeveer £2,000. Premie van £500 kan maandeliks afbetaal word.

(Pr/S102) O.V.S. Onmiddellike besitname van praktyk. Premie van £700 is alleenlik instrumente, meubels en voorraad medisyne. Vooruitsigte van uitbreiding. KOPER KAN DADELIK AS PLAASVERVANGER BEGIN.

(Pr./S103) Vrystaatse hospitaaldorp. Ou-gevestigde praktyk, wat mettertyd twee geneeshere kan dra. Groot woonhuis met spreekkamers. Instrumente, medisyne en meubels ongeveer £1,200. Prys £5,000, en sluit alles in.

(Pr/S104) Johannesburg. Well-established practice, in excellent position. Monthly cash receipts average £250. Three months introduction will be given. Premium required is £1,900 and includes surgery equipment, furniture, instruments and a diathermy. No night calls. Scope for expansion.

PARTNERSHIP FOR SALE

(P/030) Johannesburg. A fourth share is offered in an extremely well-organised high class practice. Premium required is £3,500. Full details on application.

Provincial Administration of the Cape of Good Hope

HOSPITALS DEPARTMENT

VACANCY : WOODSTOCK HOSPITAL : WOODSTOCK MEDICAL PRACTITIONER GRADE "B"

Applications are invited from suitably qualified candidates for appointment to the post of Medical Practitioner Grade "B" at the above-mentioned Hospital with salary on the scale £720 x 40—960 per annum.

The minimum requirements for appointment to the above post will be; not less than three years experience after graduation or, two years experience after registration.

In addition, a temporary cost-of-living allowance at rates prescribed from time to time by the Administrator, is payable. The present rates are £320 per annum for a married person and £100 per annum for a single person.

The appointment of the successful candidate will be in terms of and subject to the provisions of the Hospital Board Service Ordinance No. 19 of 1941 and the regulations framed thereunder, and will be on contract for a period of two years with effect from the date of assumption of duty and subject to termination at any time on 90 days' notice on either side. Accommodation is available, details of which can be obtained from the Medical Superintendent.

Applications should be submitted (in duplicate) on the prescribed form (Staff 23) which is obtainable from the Director of Hospital Services, P.O. Box 2060, 112, Loop Street, Cape Town, the Medical Superintendent, Woodstock, Rondebosch and Maternity Hospitals, Central Office, Mountain Road, Woodstock, the Medical Superintendent of any Provincial Hospital or the Secretary of any School Board in the Cape Province.

Applications must be addressed to the Medical Superintendent, Woodstock, Rondebosch and Maternity Hospitals, Central Office, Mountain Toad, Woodstock, and should be posted to arrive not later than noon on Friday, 12 March 1954.

Candidates must state the earliest date on which they can assume duty. (10732)

Siekefonds van die Suid-Afrikaanse Spoorweë en Hawens

AANSTELLING VAN SPOORWEGDOKTER: ARCADIA

Aansoeke word van geregistreerde mediese praktisyns ingewag vir aanstelling in die betrekking van spoorwegdokter, Arcadia, bestaande uit Arcadia, Muckleneuk en Sunnyside, teen 'n salaris van £1453 per jaar, plus gelde en toelaes wat in die regulasies van die Siekefonds voorgeskryf word, en met die reg om privaat te praktiseer.

Die salaris is onderhewig aan wysiging in ooreenstemming met die sensus van lede wat op 1 April van elke jaar afgeneem moet word.

Die aanstelling geskied kragtens die regulasies van die Siekefonds, en opsegging van dienste is onderworpe aan vier maande kennisgewing deur een van beide partye.

Die suksesvolle applikant moet op Pretoria woon, diens aanvaar op 'n datum wat gereël sal word, en sy pligte ooreenkomstig die regulasies van die Siekefonds uitvoer.

Aansoeke moet die Distriksekretaris, Distriksiekefondsraad, Oos-Transvaal, Scheidingstraat, Pretoria, nie later nie as 31 Maart 1954, bereik, en applikante moet die volgende vermeld:

1. Volle naam.
2. Kwalifikasies (waar en wanneer verkry).
3. Ondervinding (waar en wanneer verkry en opgedoen).
4. Datum van geboorte.
5. Land en stad van geboorte.
6. Getroud of ongetroud.
7. Of ten volle tweetalig.
8. Of Suid-Afrikaanse burger.
9. Watter staatsbetrekking, indien enige, beklee word.

Werwing deur of ten behoewe van enige applikant stel so 'n applikant bloot aan diskwalifikasie.

Enige verder besonderhede wat verlang word, kan op aanvraag van die Distriksekretaris by die bovermelde adres verkry word.

P. J. Klem
Hoofsekretaris

Johannesburg
27 Februarie 1954

Provinsiale Administrasie van die Kaap Die Goeie Hoop

HOSPITAALDEPARTEMENT

VAKATURE : WOODSTOCK-HOSPITAAL : WOODSTOCK GENEESHEER GRAAD „B"

Aansoeke word ingewag van geskikte gekwalifiseerde kandidate vir aanstelling tot die pos van Geneesheer Graad „B" aan die bogenoemde inrigting met salaris op die skaal £720 x 40—960 per jaar.

Die minimum kwalifikasies vir aanstelling tot die bogenoemde pos is; minstens drie jaar ondervinding na ontvangs van graad of, twee jaar ondervinding na registrasie.

Benewens die salarisskaal is 'n lewenskostetoelaag betaalbaar teen tariewe wat van tyd tot tyd deur die Administrateur vasgestel word. Die teenswoordige tariewe is £320 per jaar vir getroude persoon en £100 per jaar vir 'n ongetroude persoon.

Die aanstelling van die suksesvolle kandidaat is onderworpe aan die bepalinge van die Hospitaalraadsdiens Ordonnansie No. 19 van 1941 soos gewysig en die regulasies daarkragtens opgestel en is op kontrak vir 'n tydperk van twee jaar vanaf die datum van diensaanvaarding en is onderworpe aan opsegging ter enige tyd na wedersydse kennisgewing van 90 dae. Huisvesting is beskikbaar, nadere besonderhede waarvan verkrygbaar is by die Mediese Superintendent.

Aansoeke moet voorgelê word in duplo op die voorgeskrewe vorm (Staf 23) wat verkrygbaar is van die Direkteur van Hospitaaldienste, Posbus 2060, Loopstraat 112, Kaapstad, die Mediese Superintendent, Woodstock, Rondebosch en Kraamhospitale, Sentrale Kantoor, Mountainweg, Woodstock, die Mediese Superintendent van enige Provinsiale Hospitaal of die Sekretaris van enige Skoolraad in die Kaapprovinsie.

Aansoeke moet gerig word aan die Mediese Superintendent, Woodstock, Rondebosch en Kraamhospitale, Sentrale Kantoor, Mountainweg, Woodstock, en moet gepos word om hom nie later as Vrydag om 12 uur middag, 12 Maart 1954 te bereik nie.

Applikante moet die vroegste datum vermeld waarop hulle diens kan aanvaar.

(10732)

Provinsiale Administrasie van die Kaap Die Goeie Hoop

HOSPITAALDEPARTEMENT

VAKATURES VIR ERE-MEDIESE BEAMPTES

Aansoeke word ingewag van geregistreerde geneeshere vir aanstelling in die volgende poste by die Citrusdal Hospitaal, Citrusdal:

Benaming	*Aantal poste*
Ere-geneesheer	4

Die aanstelling, diensvoorwaardes en besoldiging aan bogenoemde poste verbonde, is onderworpe aan die regulasies afgekondig by Provinsiale Kennisgewing nr. 553 van 1953.

Aansoeke wat die ouderdom, kwalifikasies, ens., aangee, moet gerig word aan die Mediese Superintendent, Citrusdal Hospitaal, Citrusdal, en moet hom voor of op 8 Maart 1954 bereik.

Public Service Vacancies

1. The attention of Medical Practitioners and Dentists registered with the South African Medical and Dental Council is drawn to an advertisement appearing in the Government Gazettes of 19 and 26 February and 5 March 1954, inviting applications for the undermentioned posts:

Posts	*Salary Scale*	*Department or Administration*
District Surgeon Grade II (Nylstroom)	£1380	Health.
Medical Inspector (Johannesburg)	£1380	Health.
Medical Officer (Kimberley and Retreat, Cape)	£1020 x 60–1380	Health.
Medical Officer (Mental Hospital Service)	£1020 x 60–1380	Health.
District Surgeon, Grade II (Laersdrif, Potgietersrus, Pretoria, Cape Town, East London and Pietersburg)	£1020 x 60–1380	Health.
Dentist (Durban)	£1020 x 60–1200	Natal Provincial Administration. Closing date: 29 March 1954.
Medical Officer (on contract, for two years) (Nottingham Road and Randfontein)	£1020 x 60–1380	Health.
Dentist (on contract for two years), (Bulwer)	£1020 x 60–1200	Health. Closing date: 29 March 1954.

2. In addition to salary a cost-of-living-allowance at the rate of £234 per annum is at present payable to married officers.

3. It is emphasized that full particulars of qualifications and previous experience must be furnished but original certificates and testimonials should not be submitted. Application forms Z.83 and P.S.C. 8(*a*) are obtainable from the department/administration indicated to whom filled in forms must be addressed.

4. The closing date for the receipt of applications is 20 March 1954, except where otherwise indicated.

(44429)

City of Port Elizabeth

VACANCY

Applications are invited from registered medical practitioners for the post of Medical Officer in the City Health Department in Grade £900 x 50–£1,150 plus cost-of-living allowance and £188 6s. per annum locomotion allowance.

Applications stating age, marital state, experience, qualifications and present employment and whether in receipt of any form of pension and accompanied by copies of not more than three recent testimonials endorsed 'Medical Officer' will be received by the undersigned up to NOON on SATURDAY, 6 MARCH 1954.

The duties attached to this post will be mainly in the New Brighton Dispensary and any other duties laid down from time to time by the Medical Officer of Health.

The appointment will be subject to the Council's conditions of service and leave regulations and the successful candidate will be required to serve a probationary period and pass a medical examination by the Council's Medical Officer of Health and become a member of the Municipal Pension Fund.

Canvassing of Councillors will disqualify any candidate.

Municipal Notice No. 48, 8 February 1954. (0401/070).

G. H. Brewer,
Town Clerk

Transvaal Provincial Administration

VACANCIES : TRANSVAAL PUBLIC HOSPITALS

Applications are invited from suitably qualified candidates for the undermentioned posts at Public Hospitals in the Transvaal.

Applications should be addressed to the Medical Superintendents of the undermentioned Hospitals concerned and should contain full particulars as to the age, professional and academic and language qualifications, experience and conjugal status of the applicant and should further indicate the earliest date upon which duties can be assumed. Copies, only, of recent testimonials to be attached.

Cost-of-living-allowance payable at present to full-time employees:

Salary	*Cost-of-living-allowance* *Married*	*Single*
Over £350 per annum	£320 per annum	£100 per annum

Full-time employees receive in addition to their salaries and cost-of-living-allowance, the following privileges:

Leave and rail concession.

Successful candidates will be required to submit satisfactory certificates as also to submit to a medical examination at the hospital concerned.

Application forms are obtainable from any Transvaal Provincial Hospital or the Provincial Secretary, Hospital Services Branch, P.O. Box 2060, Pretoria.

The closing date of applications for undermentioned posts will be 8 March 1954.

Hospital	*Post*	*Emoluments*	*Remarks*
Pretoria	Assistant Orthopaedic Surgeon	£1800	Registered medical practitioner. Qualifications in surgery a recommendation.
Coronation, Johannesburg	Assistant Physician	£1200	Registered medical practitioner. Must be suitably qualified through training and experience.
Wolmaransstad	Part-time General Practitioner	£765	Registered general practitioner.
Boksburg-Benoni	Part-time Dental Surgeon	£170	Degree in Dentistry.
Coronation, Johannesburg	Casualty Officer	£620	Registered medical practitioner. Must be qualified for at least 2 years.

(44453)

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